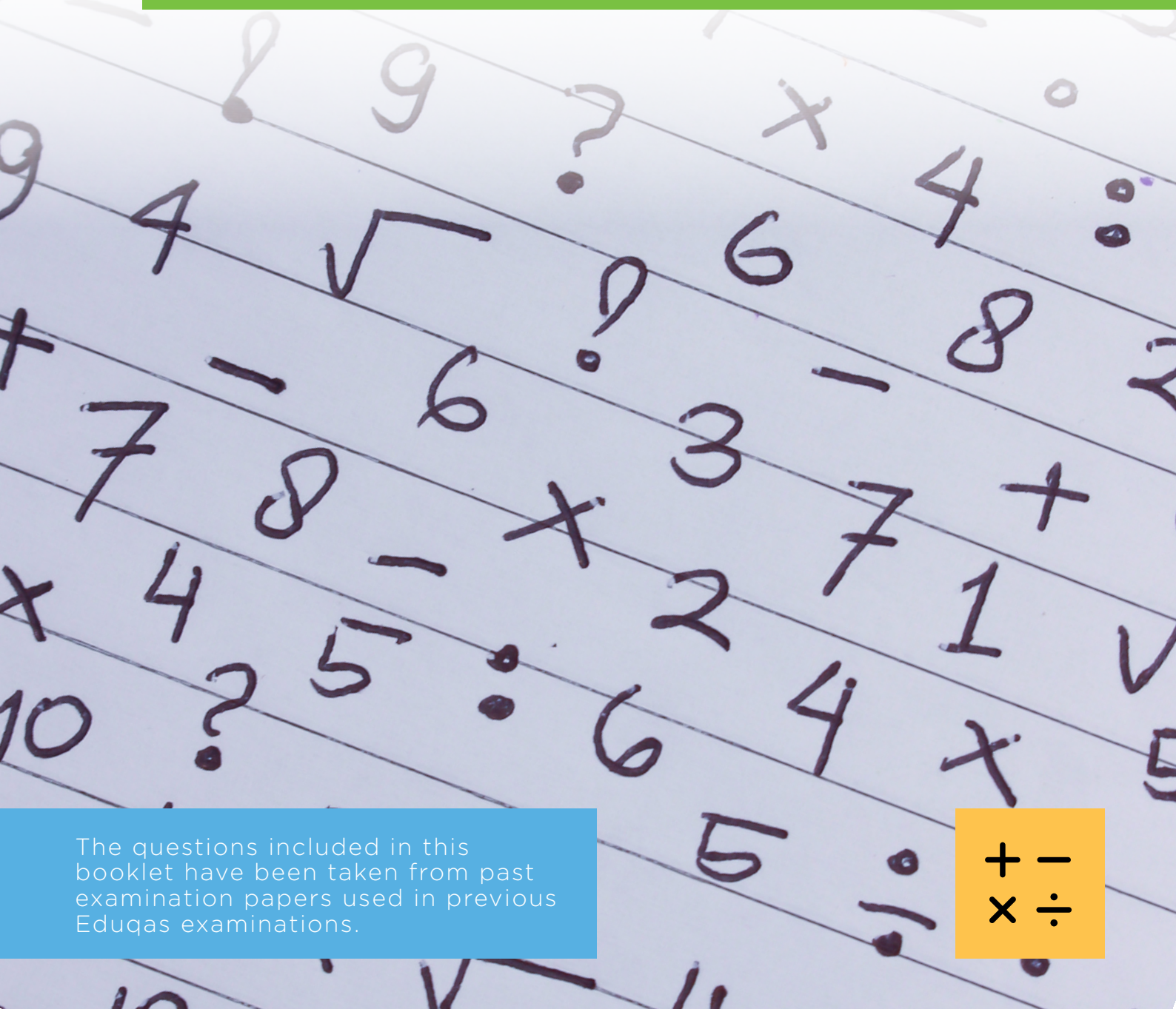
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Eduqas GCSE Mathematics Foundation Tier

Number, Ratio and Proportion Revision Booklet



The questions included in this booklet have been taken from past examination papers used in previous Eduqas examinations.

Table of Contents

1. Numbers in Words / Figures: Calculator 1
2. Place Value: Non-Calculator 3
3. Place Value: Calculator 6
4. Ordering Values: Non-Calculator 9
5. Ordering Values: Calculator 13
6. Rounding: Non-Calculator 18
7. Rounding: Calculator 20
8. Estimation: Non-Calculator 23
9. Number Facts: Non-Calculator 29
10. Number Facts: Calculator 35
11. Listing All Possible Outcomes: Non-Calculator 42
12. Listing All Possible Outcomes: Calculator 45
13. Calculating with the Four Operations: Non-Calculator 49
14. Calculating with the Four Operations: Calculator 76
15. Calculating with the Four Operations (Incl. Percentages): Non-Calculator 97
16. Negative Numbers: Non-Calculator 102
17. Negative Numbers: Calculator 104
18. Powers and Roots: Non-Calculator 106
19. Using a Calculator: Calculator 112
20. Fractions, Decimals and Percentages: Non-Calculator 116
21. Fractions, Decimals and Percentages: Calculator 122
22. Fractions / Percentages as Operators: Non-Calculator 124
23. Fractions / Percentages as Operators: Calculator 138
24. Fractions: Non-Calculator 151
25. Fractions: Calculator 153
26. Percentages: Non-Calculator 156
27. Percentages: Calculator 158
28. Reverse Percentages: Non-Calculator 160
29. Best Buys: Non-Calculator 163
30. Best Buys: Calculator 173
31. Exchange Rates: Non-Calculator 180
32. Exchange Rates: Calculator 184
33. Bills: Non-Calculator 186
34. Bills: Calculator 188
35. Product of Prime Factors: Non-Calculator 190
36. LCM / HCF: Non-Calculator 193
37. LCM / HCF: Calculator 195
38. Simple Interest: Non-Calculator 199
39. Simple Interest: Calculator 202
40. Using Standard Units: Non-Calculator 204
41. Using Standard Units: Calculator 206
42. Speed, Distance, Time: Calculator 209

43. Pressure, Force, Area: Non-Calculator 213
44. Pressure, Force, Area: Calculator 217
45. Density, Mass, Volume: Non-Calculator 219
46. Density, Mass, Volume: Calculator 221
47. Proportion: Non-Calculator 224
48. Proportion: Calculator 234
49. Ratio: Non-Calculator 242
50. Ratio: Calculator 260
51. Growth / Decay: Calculator 269
52. Standard Form: Non-Calculator 278
53. Standard Form: Calculator 284
54. Upper and Lower Bounds: Non-Calculator 287
55. Upper and Lower Bounds: Calculator 290
56. Surds: Non-Calculator 292
57. Miscellaneous: Calculator 294

Marking Schemes

1. Numbers in Words / Figures: Calculator 296
2. Place Value: Non-Calculator 298
3. Place Value: Calculator 300
4. Ordering Values: Non-Calculator 302
5. Ordering Values: Calculator 305
6. Rounding: Non-Calculator 308
7. Rounding: Calculator 310
8. Estimation: Non-Calculator 312
9. Number Facts: Non-Calculator 317
10. Number Facts: Calculator 321
11. Listing All Possible Outcomes: Non-Calculator 325
12. Listing All Possible Outcomes: Calculator 327
13. Calculating with the Four Operations: Non-Calculator 329
14. Calculating with the Four Operations: Calculator 342
15. Calculating with the Four Operations (Incl. Percentages): Non-Calculator 353
16. Negative Numbers: Non-Calculator 357
17. Negative Numbers: Calculator 359
18. Powers and Roots: Non-Calculator 361
19. Using a Calculator: Calculator 365
20. Fractions, Decimals and Percentages: Non-Calculator 368
21. Fractions, Decimals and Percentages: Calculator 372
22. Fractions / Percentages as Operators: Non-Calculator 374
23. Fractions / Percentages as Operators: Calculator 384
24. Fractions: Non-Calculator 391
25. Fractions: Calculator 393
26. Percentages: Non-Calculator 395
27. Percentages: Calculator 397
28. Reverse Percentages: Non-Calculator 399
29. Best Buys: Non-Calculator 401
30. Best Buys: Calculator 407
31. Exchange Rates: Non-Calculator 411
32. Exchange Rates: Calculator 414
33. Bills: Non-Calculator 416
34. Bills: Calculator 418
35. Product of Prime Factors: Non-Calculator 420
36. LCM / HCF: Non-Calculator 423
37. LCM / HCF: Calculator 425
38. Simple Interest: Non-Calculator 428
39. Simple Interest: Calculator 430
40. Using Standard Units: Non-Calculator 432
41. Using Standard Units: Calculator 434
42. Speed, Distance, Time: Calculator 436

43. Pressure, Force, Area: Non-Calculator 439
44. Pressure, Force, Area: Calculator 441
45. Density, Mass, Volume: Non-Calculator 443
46. Density, Mass, Volume: Calculator 445
47. Proportion: Non-Calculator 447
48. Proportion: Calculator 454
49. Ratio: Non-Calculator 458
50. Ratio: Calculator 468
51. Growth / Decay: Calculator 472
52. Standard Form: Non-Calculator 478
53. Standard Form: Calculator 482
54. Upper and Lower Bounds: Non-Calculator 484
55. Upper and Lower Bounds: Calculator 487
56. Surds: Non-Calculator 489
57. Miscellaneous: Calculator 491

Please note that any questions labelled as “Calculator” have been taken from an exam paper where the use of a calculator was allowed. This does not necessarily mean that a calculator is required to answer the question.

Numbers in Words / Figures: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	1	
Total	5	

created with
eduqas Part of WJEC Question Bank

#1

(a) Write the number 20 056 in words. [1]

.....

.....

Question taken from Eduqas examination paper 530002, June 2019

#2

(a) Write the number 340 205 in words. [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2022

#3

(a) Write the number six million five hundred and twenty thousand in figures. [1]

.....

Question taken from Eduqas examination paper 530002, November 2023

#4

(a) Write the number half a million in figures. [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2024

#5

(b) The households of Churchton owe a total of £8 100 043.

Write 8 100 043 in words. [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2019

Place Value: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	2	
#5	2	
Total	7	

created with
eduqas Part of WJEC Question Bank

#1

(a) Write down the value of 2 in the number 1·27. [1]

.....

Question taken from Eduqas examination paper 530001, May 2024

#2

(b) $526 \times 7{\cdot}9 = 4155{\cdot}4$

Use this information to work out 526×79 [1]

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2019

#3

(d) Given that $78 \times 132 = 10\,296$, write down the answer to $10\,296 \div 780$. [1]

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2024

#4

(b) $56 \times 1{\cdot}565 = 87{\cdot}64$

Use this to complete the following statement.

$560 \times$ ..... $= 87\,640$

[2]

Question taken from Eduqas examination paper 530001, May 2023

#5

(b) Given that $3{\cdot}4 \times 7{\cdot}8 = 26{\cdot}52$, write down the answer to each of the following:

(i) 34×78 [1]

(ii) $\frac{26{\cdot}52}{34}$ [1]

Question taken from Eduqas examination paper 530001, May 2024

Place Value: Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
Total	6	

created with
eduqas Part of WJEC Question Bank

#1

(c) What is the value of the 2 in the number 5·2614? [1]
Circle your answer.

$\frac{2}{1}$ $\frac{2}{100}$ $\frac{2}{10}$ 2000 200

(e) Here are four cards with numbers on them.



(i) Write down the largest four-digit number that can be made by rearranging the cards. [1]

.....

.....

(ii) Write down the smallest **even** four-digit number that can be made by rearranging the cards. [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2022

#2

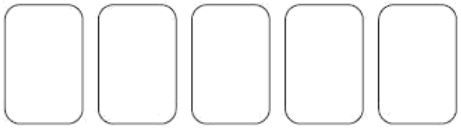
(c) Here are some number cards.



(i) Arrange five of these cards to make a 5-digit number so that there is:

- a 6 in the hundreds place,
- a 4 in the tens place.

Write your 5-digit number on the cards below. [1]



(ii) Multiply your answer to (i) by 10.
What is the new place value of the 6? [1]

.....

(d) Which of the fractions below has the same value as the 3 in 0·9375?
Circle your answer. [1]

$\frac{3}{10}$ $\frac{3}{1000}$ $\frac{3}{1}$ $\frac{3}{100}$ $\frac{3}{9}$

Question taken from Eduqas examination paper 530002, June 2019

Ordering Values: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	1	
#6	1	
#7	1	
#8	2	
#9	3	
Total	12	

created with
eduqas Part of WJEC Question Bank

#1

(f) Write these numbers in order of size. Start with the smallest number. [1]

5 –7 3·2 –7·5

....

Smallest Largest

Question taken from Eduqas examination paper 530001, May 2024

#2

(c) Write the following values in ascending order. [1]

3 0·3 0·302 0·35 0·8

.....

....

Smallest value Greatest value

Question taken from Eduqas examination paper 530001, November 2023

#3

(c) Circle the greatest value. [1]

4·07 4·18 4·601 4·0615 4·009

Question taken from Eduqas examination paper 530001, June 2019

#4

(d) Write these values in order. Start with the smallest. [1]

$\frac{3}{5}$ $\frac{3}{10}$ $\frac{3}{7}$

.....

.....

.....

Question taken from Eduqas examination paper 530001, June 2018

#5

(c) In the box, write the **smallest** possible whole number to make the statement correct. [1]

$4{\cdot}4 \quad < \quad \boxed{\quad\quad}$

Question taken from Eduqas examination paper 530001, November 2023

#6

(d) Write the following values in order.
Start with the largest. [1]

$-2 \qquad 0 \qquad -5 \qquad 0{\cdot}03$

....

Largest

Question taken from Eduqas examination paper 530001, November 2021

#7

(f) Write down a value that is less than –10. [1]

.....

.....

Question taken from Eduqas examination paper 530001, November 2022

#8

(c)

$\frac{3}{20}$	0·35	−0·3	$\frac{1}{4}$	0·031

Use a value from the box to complete the following statement. [2]

$\frac{3}{10}$ is less than .....

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2020

#9

(a) For five days in winter, the lowest temperature in Downdale was recorded. This information is shown in the table.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Temperature in °C	2	0	−6	−4·5	−2

(i) Which day was the coldest? [1]

.....

(ii) Work out the difference between the lowest temperature on Monday and the lowest temperature on Thursday. [1]

.....

.....

Difference is ..... °C

(iii) On Saturday, the lowest temperature was 3°C colder than it was on Friday.

What was the lowest temperature on Saturday? [1]

.....

.....

..... °C

Question taken from Eduqas examination paper 530001, November 2019

Ordering Values: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	2	
#6	2	
#7	2	
#8	2	
Total	12	

created with
eduqas Part of WJEC Question Bank

#1

(a) Peter uses numbers and a symbol to correctly write,

one seventh is greater than one eighth.

Circle what Peter writes. [1]

$\frac{1}{7} \leqslant \frac{1}{8}$ $\frac{1}{7} \geqslant \frac{1}{8}$ $\frac{1}{7} = \frac{1}{8}$ $\frac{1}{7} > \frac{1}{8}$ $\frac{1}{7} < \frac{1}{8}$

Question taken from Eduqas examination paper 530002, June 2023

#2

(d) Write these numbers in order of size.
Start with the smallest. [1]

6 −3 −5 3·6 3·45

☐ ☐ ☐ ☐ ☐

Smallest Largest

Question taken from Eduqas examination paper 530002, November 2022

#3

(a) Write the following statement using the correct mathematical symbol. [1]

0·24 is less than 0·3

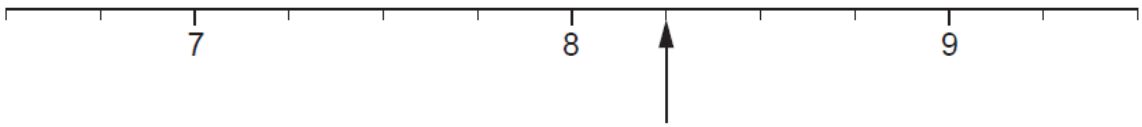
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Question taken from Eduqas examination paper 530002, June 2022

#4

(a) Part of a number line is shown below.

Which number is the arrow pointing at? [1]



.....

Question taken from Eduqas examination paper 530002, June 2022

#5

The table below shows the prices of items in a shop.

Price List	
Eraser	58p
Revision guide	£3.45
Calculator	£7.25
Pen	35p
Geometry set	£0.95

(a) Write the prices in order, starting with the cheapest. [2]

.....

.....

....

Cheapest

Question taken from Eduqas examination paper 530002, June 2019

#6

(a) Write the following numbers in order of size. Start with the smallest.
You must show all your working. [2]

56% $\frac{139}{250}$ $\frac{5}{9}$

.....

.....

.....

....., ..., ...

Question taken from Eduqas examination paper 530002, November 2018

#7

(c) Write either < or > in each empty box to make each statement true. [2]

6		15
0·34		0·7
−8		−11

Question taken from Eduqas examination paper 530002, November 2024

#8 The table shows the menu at a café.

Menu					
Main Items		**Drinks**		**Snacks**	
Roll	£3.60	Tea	£1.20	Packet of crisps	£1
Sandwich	£3.49	Coffee	£1.85	Piece of fruit	60p
Salad	£4.23	Soft drink	95p	Cereal bar	86p

(a) Lucy buys a cereal bar, a coffee, a salad and a piece of fruit.

Write down the prices for these items in order of cost.
Start with the cheapest. [2]

.....

.....

....

Cheapest

Question taken from Eduqas examination paper 530002, June 2023

Rounding: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	2	
Total	3	

created with
eduqas Part of WJEC Question Bank

#1

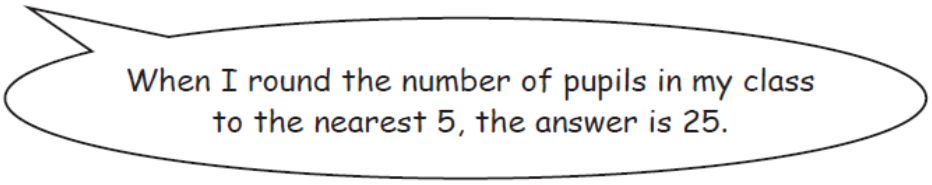
(b) Write 32 928 correct to the nearest 1000. [1]

.....

Question taken from Eduqas examination paper 530001, May 2024

#2

(c) Linda says,



How many pupils could there be in her class?
Write all the possible answers. [2]

.....

.....

Question taken from Eduqas examination paper 530001, November 2023

Rounding: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	2	
#4	3	
Total	7	

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eduqas Part of WJEC Question Bank

#1

(b) Write 68 321 correct to 2 significant figures. [1]

.....

.....

Question taken from Eduqas examination paper 530002, June 2022

#2

(b) Write 0·058 34 correct to 1 significant figure. [1]

.....

Question taken from Eduqas examination paper 530002, June 2023

#3

(d) Write 465 784

(i) correct to the nearest 10, [1]

.....

(ii) correct to the nearest 1000. [1]

.....

Question taken from Eduqas examination paper 530002, November 2023

#4

This is part of a menu in a restaurant.

Main courses		*Desserts*	
Lasagne	£8.95	Chocolate Brownie	£4.50
Casserole	£10.50	Lemon Tart	£3.75
Fish Pie	£9.99		

(a) The Smith family have:

- 2 Casseroles,
- 2 Fish Pies,
- 3 Chocolate Brownies,
- 1 Lemon Tart.

(i) Find the total cost of their meals. [2]

.....

.....

.....

.....

.....

.....

(ii) Round your answer to the nearest ten pounds. [1]

.....

Question taken from Eduqas examination paper 530002, November 2018

Estimation: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	3	
#4	3	
#5	4	
#6	4	
Total	18	

created with
eduqas Part of WJEC Question Bank

#1

(b) Callum is working out $(41 - 29{\cdot}5)^2$.

He **estimates** the answer to be 700.

Is Callum's answer a good estimate?

Yes ☐ No ☐

Show how you decide. [2]

Question taken from Eduqas examination paper 530001, November 2021

#2

(a) **Estimate** the value of $\frac{2{\cdot}13 \times 99{\cdot}4}{39{\cdot}5}$.

You must show all your working. [2]

Question taken from Eduqas examination paper 530001, May 2024

#3

Chris and Sue are buying some items for their vegetable garden.

(b) Sue buys 20 bags of compost costing £6.99 each and some packets of seed costing £2.89 each.

She correctly **estimates** her bill to be £170.

How many packets of seed did she buy? [3]

Question taken from Eduqas examination paper 530001, November 2020

#4

(b) Mr Cooke takes his children out for lunch.
The list below shows the food they order.

1 Mega Burger	£8.99
1 Vegan Burger	£7.25
1 Chicken Burger	£8.99
1 Regular Burger	£6.30
1 Fish Pie	£9.90
1 Vegetarian Lasagne	£6.80

When he pays the bill, Mr Cooke uses this special offer.

Buy any 4 **burgers** and get the 2 cheapest free

Estimate the total amount of Mr Cooke's bill.
Give your answer correct to the nearest pound.
You must show all your working. [3]

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, May 2022

#5

Donna wants to take 3 guinea pigs and 2 rabbits to the vet.

To be safe, Donna's pet carrier must not carry pets with a total mass greater than 7 kilograms.

Donna weighs one guinea pig and overestimates the total mass of her 3 guinea pigs to be 3000 grams.

She weighs her rabbits and writes her results in this table.



Snowy	Sooty
1986 grams	1834 grams

- Write down a calculation to **estimate** the **total** mass of Donna's **rabbits**.
- Using the information in the question, decide whether Donna can safely take all her pets to the vet in her pet carrier.
  Show how you decided. [4]

.....

.....

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, June 2018

#6

David is laying a small circle of paving stones in his garden.

(c) David is going to fill the space around the paving stones with gravel.
He works out that he needs 18 small bags of gravel.

Green Garden Centre
Offer of the week
Any small bag of gravel £7.19
Buy 3 bags for the price of 2

(i) **Estimate** how much David will have to pay in total for his gravel from Green Garden Centre.
You must show all your working. [3]

Estimate £ .....

(ii) Is your answer to part (i) an over-estimate or an under-estimate of the cost of David's gravel?

Over-estimate ☐ Under-estimate ☐

Give a reason for your decision. [1]

Question taken from Eduqas examination paper 530001, November 2018

Number Facts: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	2	
#5	2	
#6	3	
#7	3	
#8	4	
#9	4	
Total	21	

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eduqas Part of WJEC Question Bank

#1

(c) Write down the number that is both a factor of 16 and a prime number. [1]

.....

.....

Question taken from Eduqas examination paper 530001, November 2024

#2

(b) Write the following statement using digits and symbols.

Five minus three is not equal to eight. [1]

.....

.....

Question taken from Eduqas examination paper 530001, November 2018

#3

(b) Mary adds two **odd** numbers together and gets an answer of 21.

Could Mary's answer be correct?

☐ Yes ☐ No ☐ Cannot tell

Give a reason for your answer. [1]

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2023

#4

(a) Ben needs 90 bottles of water for an athletics event.
The bottles of water are sold in packs of 8.

He makes this calculation to find out the number of packs he needs:

90 ÷ 8 = 11·25

He decides to buy 11 packs of water.

Is Ben's decision correct?
You must give a reason for your answer. [1]

☐ Yes ☐ No

.....

.....

(b) Ben divides the 90 bottles in the ratio 4:1.

He says,

"To work out the larger share, we should divide 90 by 4".

Explain what is wrong with Ben's method. [1]

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2023

#5

(a) 2 3 8 16 20 24 29

From the numbers in the list above, write down

(i) a square number, [1]

.....

(ii) the smallest prime number. [1]

.....

Question taken from Eduqas examination paper 530001, November 2021

#6

(c) Complete each statement with a number from the box.

6	8	10	13	15	24	49	55

(i) ..... is a prime number. [1]

(ii) ..... is a multiple of 12. [1]

(iii) ..... is a square number. [1]

Question taken from Eduqas examination paper 530001, May 2023

#7

(a) Most numbers have an **even** number of factors.

For example,
10 has **four** factors: 1, 2, 5 and 10.
11 has **two** factors: 1 and 11.

There is one number between 13 and 19 that has an **odd** number of factors.
Find this number.
Write down all the factors of this number. [2]

The number is .....

The factors of this number are .....

(b) Write down the first three **even** multiples of 7. [1]

..... , ... , ...

Question taken from Eduqas examination paper 530001, November 2023

#8

(b) (i) When two numbers are multiplied, the result is –12.
When the same two numbers are added, the result is 1.

What are the two numbers? [2]

..... and .....

(ii) When three numbers are multiplied together, the result is 30.
When the same three numbers are added together, the result is 0.

What are the three numbers? [2]

..... and ..... and .....

Question taken from Eduqas examination paper 530001, November 2018

#9

(a) Find **two** whole numbers that
- have a difference of 20, and
- when one is divided by the other, the answer is –9. [2]

..... and .....

(b) Find **three** whole numbers that
- multiply to give 24, and
- add to a total of –5. [2]

..... and ..... and .....

Question taken from Eduqas examination paper 530001, November 2022

Number Facts: Calculator

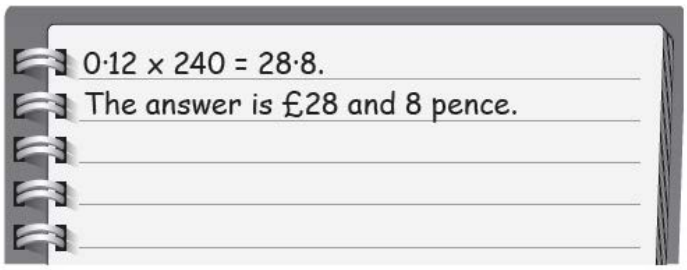
Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	2	
#4	3	
#5	3	
#6	3	
#7	4	
#8	4	
#9	4	
#10	7	
Total	32	

created with
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#1

(a) Connor has calculated 12% of £240.

This is his answer.



What is wrong with this answer? [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2018

#2

(c) Rearrange these five boxes to create a calculation with an answer of 8. [1]

4	6	24	+	÷

Write your calculation in the boxes below.

					=	8

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2023

#3

Dave is thinking of a number.
The number is:

- greater than 200,
- less than 300,
- a square number,
- a multiple of 5.

What number is Dave thinking of? [2]

.....

.....

.....

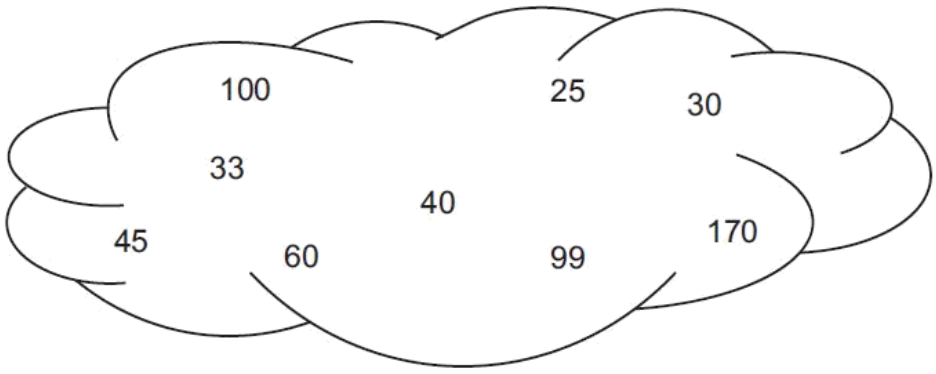
.....

Dave is thinking of the number .....

Question taken from Eduqas examination paper 530002, June 2019

#4

(a) Circle the numbers that are multiples of **both** 3 and 5. [2]



(b) Lauren says,

"37 is a factor of 888."

Show that she is correct. [1]

.....

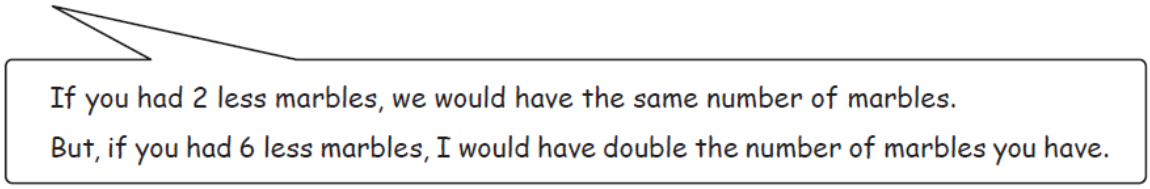
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Question taken from Eduqas examination paper 530002, November 2018

#5

Ali and Beth have fewer than 12 marbles each.

Ali says to Beth:



How many marbles do they each have?
You must show all your working. [3]

Ali has ..... marbles and Beth has ..... marbles

Question taken from Eduqas examination paper 530002, November 2021

#6

(c) Three of the factors of 18 have a sum of 17.
Write these three factors in the boxes below. [3]



Question taken from Eduqas examination paper 530002, June 2023

#7

18	29	94	108	162	343

From the numbers in the list above, write down:

(a) a multiple of 4 [1]

(b) a prime number [1]

(c) the square root of 324 [1]

(d) a cube number. [1]

Question taken from Eduqas examination paper 530002, November 2020

#8

Use the list of numbers below to complete the following statements.

75 50 13 25 17

(a) The prime numbers are ..... and .....

The sum of the prime numbers is ..... [2]

(b) The product of two numbers from the list is calculated.
This product is as large as possible and is **not** a multiple of 10.

The two numbers are ..... and .....

The product of these numbers is ..... [2]

Question taken from Eduqas examination paper 530002, June 2018

#9

15	20	31	91	169	200

From the numbers in the list above, write down:

(a) a multiple of 7 [1]

.....

(b) a factor of 100 [1]

.....

(c) a prime number [1]

.....

(d) a square number [1]

.....

Question taken from Eduqas examination paper 530002, June 2024

#10 Roman has the nine cards shown below.

9	13	14	15	17	24	27	32	36

You must only use the numbers on these cards.
You must show all your working.

(a) (i) Calculate the sum of the two prime numbers. [2]

.....

.....

(ii) Calculate the product of the two square numbers. [2]

.....

.....

(iii) Find the number which is both a factor of 72 and a multiple of 8. [2]

.....

.....

(b) Roman picks one of his nine cards at random.
He says,

"I have a $\frac{2}{9}$ chance of picking a card with a cube number on it."

Is Roman's statement correct?

Yes ☐ No ☐

Show how you decide. [1]

.....

.....

.....

Question taken from Eduqas examination paper 530002, June 2022

Listing All Possible Outcomes: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
Total	4	

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#1

Sally has two sets of cards.
3 cards have letters on them and 4 cards have numbers on them.



She shuffles each set and chooses one card from each set at random.

Complete the table to show all the possible pairs of cards. [2]

Letter card	Number card
A	1
A	2

You may not need all the lines in the table.

Question taken from Eduqas examination paper 530001, November 2022

#2

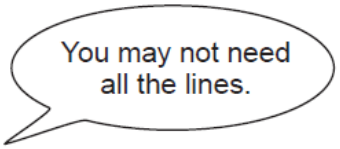
Miss Watkins picks a team of one girl and one boy to take part in a competition.

She chooses the team from these students.

Girls:	Poppy (P)	Ruby (R)	Sally (S)	Zoe (Z)
Boys:	Tariq (T)	Will (W)		

(a) Complete the list to show all the different options that Miss Watkins has.
The first two have been completed for you. [2]

Girl	Boy
P	T
P	W



Question taken from Eduqas examination paper 530001, May 2022

Listing All Possible Outcomes: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
Total	8	

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#1

Jack sells ice-cream cones at a beach cafe.
Each ice-cream cone has **two** scoops of ice cream.



(a) The scoops can be the same or different flavours.

There are three possible flavours to choose from:

- chocolate (C),
- vanilla (V),
- strawberry (S).

List all the possible flavour combinations for two scoops of ice cream. [2]

.....

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2020

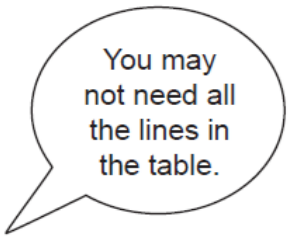
#2

(a) Three fair coins are thrown at the same time.



(i) Complete the table to list all the different possible outcomes.
The first row has been completed for you. [2]

Coin 1	Coin 2	Coin 3
H	**H**	**H**



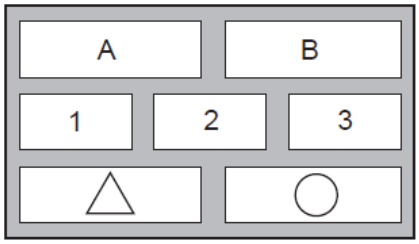
(ii) Write down the probability that the outcome is three heads. [1]

.....

Question taken from Eduqas examination paper 530002, November 2023

#3

Jade must enter a code to open her safe by pressing three buttons.
The code consists of one letter, one number and one shape.



(a) List all the possible code combinations.
One has been completed for you. [2]

Letter	Number	Shape
A	1	△

You may not need to use all the lines.

(b) Jade has forgotten her code.
She enters one letter, one number and one shape at random.

What is the probability that she enters the correct code? [1]

.....

.....

Question taken from Eduqas examination paper 530002, June 2024

Calculating with the Four Operations: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	2	
#3	2	
#4	2	
#5	2	
#6	2	
#7	2	
#8	2	
#9	3	
#10	3	
#11	3	
#12	3	
#13	3	
#14	4	
#15	4	
#16	4	

#17	4
#18	4
#19	4
#20	4
#21	4
#22	4
#23	4
#24	4
#25	4
#26	4
#27	5
#28	5
#29	5
#30	5
#31	5
#32	5
#33	8
Total	120

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#1

(d) Calculate 20 + 4 ÷ 4. [1]

.....

Question taken from Eduqas examination paper 530001, May 2024

#2

(b) Rhiannon is a club member.
She pays £5 for each lesson.
A grading test costs £12.50.

Rhiannon passes her first grading test after 16 lessons.

How much has Rhiannon paid in total for her lessons and grading test? [2]

.....

.....

.....

.....

Total cost £ .....

Question taken from Eduqas examination paper 530001, November 2018

#3

(a) (i) Work out 30 × 20. [1]

.....

.....

.....

(ii) Work out 96 ÷ 4. [1]

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2020

#4

(a) (i) Work out 0·5 × 100. [1]

(ii) Work out 45 ÷ 10. [1]

Question taken from Eduqas examination paper 530001, June 2019

#5

(a) Work out (12 + 9) ÷ 3. [1]

(e) Work out 100 × 1·098. [1]

Question taken from Eduqas examination paper 530001, June 2018

#6

(a) Work out each of the following.

(i) 5·1 × 10 [1]

(ii) 70 500 ÷ 100 [1]

Question taken from Eduqas examination paper 530001, November 2018

#7

(a) Put one pair of brackets in each calculation to make it correct.

(i) $3 \times 4 + 1 \times 2 = 30$ [1]

(ii) $50 - 36 \div 2 \times 3 = 21$ [1]

Question taken from Eduqas examination paper 530001, November 2021

#8

A shop that sells scented candles is holding a sale.
The original price of each candle was £3.

In the sale, the candles are sold at half price.
Sam has £38.
Sam thinks that the maximum number of candles that she can now buy is exactly twice as many as she could buy at the original price.

Is Sam correct?

☐ Yes ☐ No

You must explain your reasoning. [2]

Question taken from Eduqas examination paper 530001, May 2024

#9

(a) Work out the following.

(i) 20×40 [1]

(ii) $57 \div 3$ [1]

(v) $1{\cdot}03 + 12{\cdot}8$ [1]

Question taken from Eduqas examination paper 530001, November 2023

#10

(b) Sangita thinks that $3 \times \frac{1}{7} = \frac{3}{21}$.

Explain why Sangita is wrong. [1]

(c) Work out $\frac{3}{4} + \frac{1}{6}$. [2]

Question taken from Eduqas examination paper 530001, November 2018

#11

Huw has a maths test.

(a) For the first question, Huw divides 752 by a whole number.
His answer, which is correct, is 25 remainder 27.

What whole number did Huw divide by? [3]

Question taken from Eduqas examination paper 530001, November 2019

#12

When a fraction is subtracted from $\frac{5}{7}$ the answer is $\frac{2}{21}$.

Find the fraction that is subtracted. [3]

Question taken from Eduqas examination paper 530001, November 2020

#13

(a) Brad is a landscape gardener.



One working day, he spends:

- $\frac{3}{7}$ of his time designing a garden,
- $\frac{5}{14}$ of his time digging,
- the rest of his time buying plants.

What fraction of this working day does Brad spend buying plants? [3]

Question taken from Eduqas examination paper 530001, May 2022

#14

Shania has two pieces of ribbon.

One piece is $5\frac{1}{4}$ metres long.

The difference between the lengths of the two pieces is $2\frac{9}{20}$ metres.

Work out the **two** possible lengths of the other piece of ribbon.
Give each of your answers as a mixed number in its simplest form. [4]

Question taken from Eduqas examination paper 530001, November 2019

#15

(a) Work out each of the following.

(i) 541 + 59 [1]

(ii) 350 ÷ 5 [1]

(iii) 1·076 – 0·15 [2]

Question taken from Eduqas examination paper 530001, November 2019

#16 *(b)* The table shows the populations of some places in Hayshire at the end of 2018.

Place	Population
Tanham	12 212
Copley	4658
Pinestow	619
Elmvale	3600

(i) Write the populations in order of size.
Start with the smallest. [1]

..... , ... , ... , ...
Smallest

(ii) The population of Elmvale is predicted to be 4700 by the end of 2019.

To work out the number of houses to build for the extra people, the builders use the rule:

Build one house for every 4 extra people.

How many houses should they build? [3]

..... houses

Question taken from Eduqas examination paper 530001, November 2019

#17

(a) Kelly is planning a family trip to the zoo.

The 2 adults and 3 children will all travel in the same car.
Each person will need an entrance ticket and lunch.

The costs for the trip are:

Petrol	£40
Tickets to the zoo	£15 per adult £10 per child
Lunch	£12 per adult £7 per child

Kelly has £180 to spend on the trip.
She pays for the petrol, the tickets and the lunches.
How much money will she have left? [4]

Kelly has ..... left.

Question taken from Eduqas examination paper 530001, May 2024

#18

(a) Calculate each of the following.

(i) $7000 \div 10$ [1]

(ii) 65×1000 [1]

(iii) $9 - 14$ [1]

(b) Complete this sum. [1]

..... + 121 = 200

Question taken from Eduqas examination paper 530001, May 2023

#19

(b) (i) Work out $420 + 85$. [1]

(ii) Work out $0{\cdot}045 \times 100$. [1]

(e) Work out $\frac{6 \times 40}{12}$. [2]

Question taken from Eduqas examination paper 530001, November 2021

#20

(a) Work out 3×19. [1]

(b) Work out $3{\cdot}162 + 10{\cdot}57$. [2]

(c) Work out $8 + 6 \div 2$. [1]

Question taken from Eduqas examination paper 530001, November 2022

#21

(a) Calculate each of the following.

(i) 3×400 [1]

(ii) $600 \div 1000$ [1]

(iii) $10 + 4 \times 3$ [1]

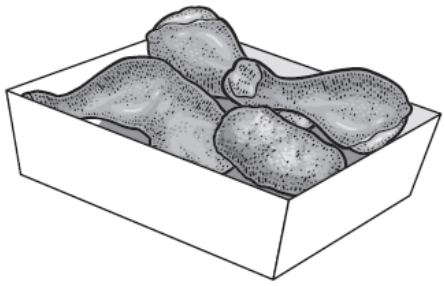
(iv) $6 - (-7)$ [1]

Question taken from Eduqas examination paper 530001, May 2022

#22 Tomas owns a take-away food shop.

(a) Here is part of the menu.

One chicken piece	£2.00
Two chicken pieces	£3.20
Three chicken pieces	£4.20



Jean orders 4 chicken pieces.
Tomas charges Jean £6.40.

(i) Show how Tomas has worked out the cost of Jean's 4 chicken pieces. [1]

.....

.....

.....

.....

(ii) Jean says,

"You have charged me 20p too much."

Show how Jean may be correct. [1]

.....

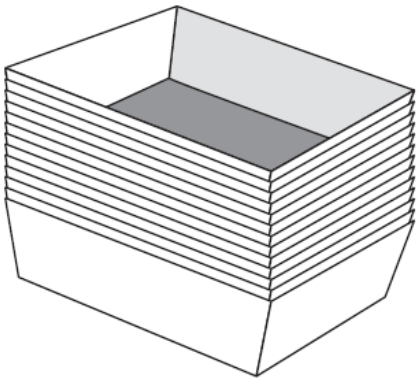
.....

.....

.....

(b) Tomas orders some food trays.
The table shows his options.

Number of Trays	Cost
25	£5
50	£9
100	£17
250	£33
1000	£99



Tomas spends exactly £83 on trays.
He orders as many trays as possible.

How many trays does Tomas order? [2]

.....

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2022

#23

Lewis buys the following items:

- 3 bottles of milk costing £1.50 each
- 1 loaf of bread costing £1.40
- 2 blocks of butter.

Lewis pays with a £10 note and is given 60p change.
How much does each block of butter cost?
You must show all your working. [4]

Each block of butter costs .....

Question taken from Eduqas examination paper 530001, November 2024

#24

One evening all the members of a craft club either paint, sew or knit.
Each member takes part in only one activity.

- $\frac{1}{3}$ of the members paint.
- $\frac{2}{5}$ of the members sew.
- The remaining members all knit.

That evening, 33 of the members either **paint** or **sew**.

How many members does the craft club have in total? [4]

Question taken from Eduqas examination paper 530001, November 2021

#25

(a) Calculate $\frac{9}{14} - \frac{2}{7}$. [2]

(b) Calculate $\frac{10}{13} \times \frac{1}{5}$.
Give your answer in its simplest form. [2]

Question taken from Eduqas examination paper 530001, November 2022

#26

(a) Calculate 7×5^2. [2]

(b) Put one pair of brackets in each calculation to make it correct.

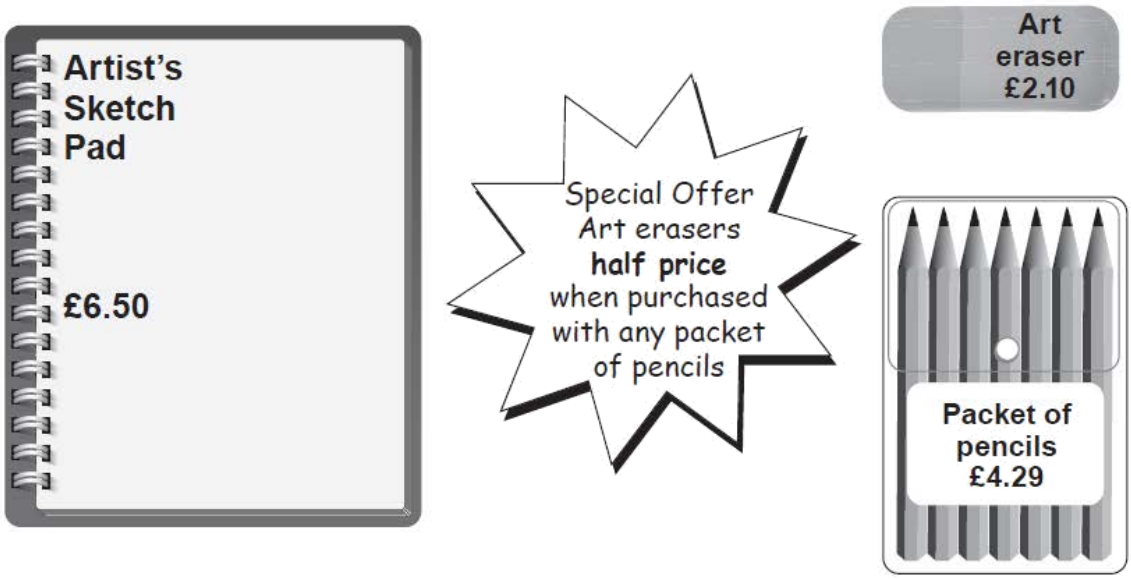
(i) $4 \times 3 - 1 + 6 = 14$ [1]

(ii) $\sqrt{36} \div 2 + 1 = 2$ [1]

Question taken from Eduqas examination paper 530001, May 2023

#27

Georgia has exactly £20 in her purse and goes shopping for art supplies.
She buys a sketch pad, a packet of pencils and an eraser, as shown below.



(a) How much does Georgia pay for her art supplies? [3]

(b) Georgia then goes to a different shop and buys paint costing £2.75.

How much money does Georgia have left in her purse after she buys the paint? [2]

Georgia has ..... left.

Question taken from Eduqas examination paper 530001, June 2018

#28

(a) Calculate $\frac{3}{7} + \frac{7}{9}$.

Give your answer as a mixed number. [3]

(b) When a fraction is divided by $\frac{1}{3}$ the answer is $\frac{6}{7}$.

Find this fraction. [2]

Question taken from Eduqas examination paper 530001, June 2019

#29

(a) Calculate 0·4 ÷ 0·01. [1]

(b) Calculate each of the following.
Give your answers in their simplest form.

(i) $\frac{1}{4}+\frac{3}{5}$ [2]

(ii) $\frac{5}{6}\times\frac{3}{10}$ [2]

Question taken from Eduqas examination paper 530001, May 2024

#30

(a) What number must be added to 268 to make 415? [1]

(b) Work out 16×6. [1]

(c) Work out $\frac{0{\cdot}5 \times 30}{6}$. [2]

(d) Work out $5 \times 3 + 4 \div 2$. [1]

Question taken from Eduqas examination paper 530001, November 2024

#31

(a) Calculate each of the following.

(i) $12{\cdot}1 - 1{\cdot}36$ [2]

(ii) $0{\cdot}6 \times 0{\cdot}4$ [1]

(iii) $\frac{7}{12} - \frac{1}{6}$ [2]

Question taken from Eduqas examination paper 530001, May 2023

#32

Rosheen works in a restaurant.

(a) On a weekday, her pay rate is £9 per hour.
One Monday, Rosheen worked for 6·5 hours.

How much did Rosheen earn for this day's work? [2]

(b) At the weekend, Rosheen's pay rate is higher.

One weekend, she worked for 14 hours.
She earned a total of £314 which included £160 in tips.

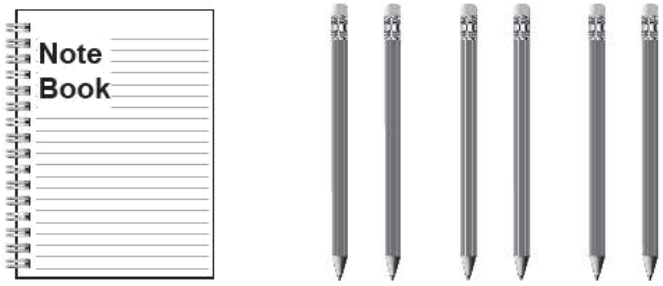
What is Rosheen's pay rate per hour at the weekend? [3]

Question taken from Eduqas examination paper 530001, May 2022

#33

Petra is shopping with 2 of her friends.

(a) She buys a note book and six **identical** pencils.



The note book costs the same as 2 of the pencils.
Her bill is £16.80.

(i) How much does a note book cost? [3]

(ii) Petra pays with a £50 note.
She is given £34.20 change.

She tells the shopkeeper,

"You have given me too much change."

Is Petra correct?

Yes ☐ No ☐

Show how you decide. [1]

(b) The 3 friends go to a café.
Here is part of the menu.

Drinks	
Flat white	£4.25
Latte	£3.95
Americano	£2.95
Tea (per pot)	£3.00
Cakes	
Cupcake	£2.00
Cake of the day (per slice)	£4.00

Today only!

3 for 2* on all drinks
AND
3 for 2* on all cakes

*cheapest drink free and cheapest cake free

Each of the 3 friends orders one drink and one cake from this menu.

They save a total of exactly £5 using the 3 for 2 offers.
Their bill totals £16.50 **after** the saving has been taken off.

What drinks and cakes did the 3 friends order?
You must show all your working. [4]

Drinks ..... , ... , ...

Cakes ..... , ... , ...

Question taken from Eduqas examination paper 530001, June 2019

Calculating with the Four Operations: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	4	
#4	5	
#5	5	
#6	5	
#7	5	
#8	5	
#9	5	
#10	5	
#11	5	
#12	5	
#13	5	
#14	6	
#15	6	
#16	6	

#17	7
#18	7
#19	7
Total	98

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#1

Connie reads this sign at a fairground:

Rides £4.80 each
Buy a wristband for £6 then all rides £3 each

(a) How much would Connie pay to buy a wristband and go on 9 rides? [2]

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2018

#2

(b) Fill in the boxes to make each calculation correct. [3]

3765	−		=	2985
53	×		=	1431
	÷	25	=	75

Question taken from Eduqas examination paper 530002, November 2024

#3 The table below is part of a form for ordering equipment.

Fill in all the missing numbers. [4]

Item	Quantity	Cost per box	Total cost
Box of exercise books	8	£13.30	£ .....
Box of rulers	.....	95 p	£23.75
Box of pens	7	£	£8.47
	Total		£ .....

.....

.....

Question taken from Eduqas examination paper 530002, June 2018

#4

A sign in a shop shows the cost of sending letters and parcels.

What are you sending?	Class	Cost
Small letter	1st	67p
	2nd	58p
Large letter	1st	£1.01
	2nd	79p
Small parcel	1st	£3.45
	2nd	£2.95
Medium parcel	1st	£5.75
	2nd	£5.05

Customers can choose 1st or 2nd class post for different sizes of letter or parcel.

(a) What is the cost of sending 5 small letters, using 1st class post? [1]

.....

.....

(b) Helen always uses first class post.
She makes a large letter into a small letter by folding it in half.

How much money does this save? [2]

.....

.....

(c) Brad sends:
- 3 small parcels using 2nd class post,
- 2 medium parcels using 1st class post.

How much does Brad pay to send all 5 parcels? [2]

.....

.....

.....

.....

Brad pays £ .....

Question taken from Eduqas examination paper 530002, November 2019

#5

The table below shows the prices of items in a shop.

Price List	
Eraser	58p
Revision guide	£3.45
Calculator	£7.25
Pen	35p
Geometry set	£0.95

(b) What is the cost of 1100 erasers? [1]

.....

.....

(c) Fred buys some pens.
He pays a total of £4.90.
How many pens does Fred buy? [2]

.....

.....

(d) Salma buys a pen, a geometry set and a calculator.
She pays with a £10 note.
How much change should she get? [2]

.....

.....

.....

.....

Question taken from Eduqas examination paper 530002, June 2019

#6



Jack sells ice-cream cones at a beach cafe.
Each ice-cream cone has **two** scoops of ice cream.

(b) Two scoops of vanilla ice cream is the most popular.
Jack gets 125 single scoops of vanilla ice cream from one tub.
Each tub costs £43.50.
Jack needs to buy enough tubs to make 1300 of his two-scoop vanilla ice-cream cones.

What is the least amount Jack will need to pay? [5]

Question taken from Eduqas examination paper 530002, November 2020

#7

This is part of a menu in a restaurant.

Main courses		*Desserts*	
Lasagne	£8.95	Chocolate Brownie	£4.50
Casserole	£10.50	Lemon Tart	£3.75
Fish Pie	£9.99		

(a) The Smith family have:

- 2 Casseroles,
- 2 Fish Pies,
- 3 Chocolate Brownies,
- 1 Lemon Tart.

(i) Find the total cost of their meals. [2]

(ii) Round your answer to the nearest ten pounds. [1]

(b) The next day, the restaurant has a special offer.

> Order 4 main courses and get the cheapest free.

A group of 4 friends has:

- 1 Lasagne,
- 2 Casseroles,
- 1 Fish Pie.

Calculate the total amount that the group spends using the special offer. [2]

Question taken from Eduqas examination paper 530002, November 2018

#8



A shop sells bracelets.
Words can be engraved on the bracelet and charms can be added.
The price list is shown below.

Price List

 Flower charm **£18**

 Heart charm **£13.20**

 Star charm **£37.54**

 Bracelet **£45**

$ABCDE$ Engraving **84p** for each letter

(a) Rhian buys a bracelet with a five-letter word engraved on it.
She also buys a heart charm.
What is the total cost of these items? [2]

(b) Huw spent £187.70 on star charms.
How many star charms did he buy? [1]

(c) Caitlyn has a special offer voucher.

Voucher
One bracelet and four flower charms for £95

Caitlyn bought one bracelet and four flower charms using the voucher.
How much cheaper is it to buy these items using the voucher than paying the usual price? [2]

Question taken from Eduqas examination paper 530002, June 2024

#9

Part of the breakfast menu at a café is shown below.

Breakfast Menu	
Small breakfast	£4.85
Add extra items	
One egg	45p
One sausage	£1.50
One portion of tomatoes	79p
One portion of mushrooms	84p

(a) Ffion orders a small breakfast with one extra egg and one extra sausage.

(i) What is the total cost for this? [1]

.....

.....

(ii) Ffion is given a 10% discount on her order.
How much money will she save? [1]

.....

.....

(b) Carl pays for three small breakfasts.
He pays with a £20 note.
How much change should he get? [2]

.....

.....

.....

.....

(c) Catrin has a voucher to use at the café.

Voucher
A small breakfast plus two extra items:
Pay £6.50

She orders a small breakfast and two extra items.
Catrin uses her voucher instead of paying the usual price.

Will Catrin **definitely** save money?

Yes ☐ No ☐

Give the reason for your answer. [1]

.....

.....

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2024

#10

Paul always travels to and from work by bus.

Each day, he buys a return ticket costing £11.25.



The bus company also offers the following tickets.

Day ticket	Unlimited travel, all day	£8.35
Weekly ticket	Unlimited travel for 7 days	£30.50

(a) How much would Paul save each day by buying a day ticket? [1]

.....

.....

.....

(b) Paul usually works for 5 days a week.

How much would Paul save each week by buying a weekly ticket instead of return tickets? [2]

.....

.....

.....

(c) Next week, Paul will only be working for 3 days.

What is the cheapest way he can get to work next week and how much will it cost? [2]

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2021

#11

The cost of various items sold at a shop are shown below.

Item	Cost
Notebook	£2.49
File	£3.59
Pen	95p
Calculator	£10.50
Pencil	55p
Stapler	£2.15

(a) Find the total cost of buying a calculator, a file and a pencil. [1]

.....

.....

(b) Nisreen bought five notebooks.
She paid for them with a £20 note.

How much change should she get? [2]

.....

.....

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.....

(c) George bought two different items.
He paid for them with a £5 note and received £1.90 change.

Which two items did he buy?
You must show all your working. [2]

.....

.....

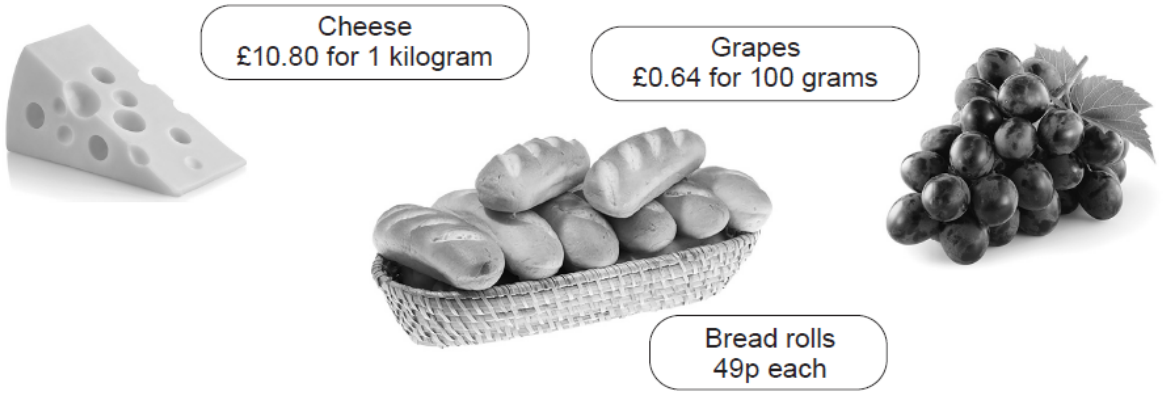
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Items are ..... and .....

Question taken from Eduqas examination paper 530002, June 2022

#12



Jordan and Lucy are shopping for food.

(a) Jordan buys 0·5 kilograms of cheese, 300 grams of grapes and 4 bread rolls.
How much does Jordan pay? [2]

Jordan pays .....

(b) Lucy buys 0·25 kilograms of cheese and 400 grams of grapes.
How much change should Lucy have if she pays with a £10 note? [3]

Lucy's change is .....

Question taken from Eduqas examination paper 530002, November 2021

#13

A shop sells storage boxes.
A stack of four of these boxes is shown below.



Diagram not drawn to scale

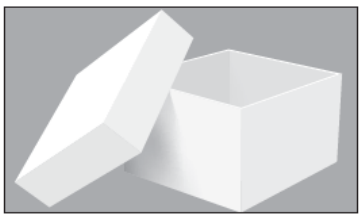
The height of a single box is 35·2 cm.
The height of four of the same boxes when stacked is 52 cm.

A different stack of these boxes has a height of 85·6 cm.
How many boxes are in this stack? [5]

Question taken from Eduqas examination paper 530002, June 2023

#14

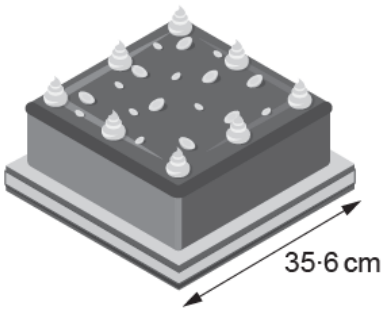
Austin owns a cake shop.



(a) He sells his cakes in boxes.

Austin buys some boxes.
Each box costs £1.35.
He pays a total of £63.75 which includes a £3 delivery charge.
How many boxes did Austin buy? [2]

(b) Austin uses cake boards to display his cakes.
Each board is square with sides of length 35·6 cm.
He puts ribbon around the perimeter of the boards for decoration.



Austin has 4 metres of ribbon.
He puts the ribbon around the perimeter of **two** cake boards.
The ribbon does not overlap on either board.

How much ribbon will Austin have left over? [4]

Austin will have ..... of ribbon left over.

Question taken from Eduqas examination paper 530002, June 2024

#15 The table shows the menu at a café.

Menu					
Main Items		**Drinks**		**Snacks**	
Roll	£3.60	Tea	£1.20	Packet of crisps	£1
Sandwich	£3.49	Coffee	£1.85	Piece of fruit	60p
Salad	£4.23	Soft drink	95p	Cereal bar	86p

(b) The café offers a Meal Deal.

> Buy any main item with a drink and snack for £5.

Jason buys a sandwich. Later he buys a tea and a packet of crisps.

How much **less** would he have paid if he had bought these three items using the Meal Deal? [2]

.....

.....

(c) (i) On Monday, Emma buys 8 soft drinks.
What is the total cost for this? [2]

.....

.....

(ii) On Tuesday, Emma only buys coffees.
She spends £12.95.
How many coffees does she buy? [2]

.....

.....

Question taken from Eduqas examination paper 530002, June 2023

#16



Pack of sandwiches £2.74



Apples 62p each

(a) (i) Ami buys a pack of sandwiches and an apple for herself and the same for each of her three children.

How much does this cost altogether? [3]

.....

.....

(ii) Ami pays with a £20 note.

How much change should she get? [1]

.....

.....



Drink £1.15

(b)

A 'Meal Deal' gives a pack of sandwiches, an apple and a drink for £3.79.
Alex buys one 'Meal Deal'.

How much cheaper is this than buying the three items separately? [2]

.....

.....

Question taken from Eduqas examination paper 530002, November 2020

#17

Enzo and Jane are taking a group of children to the beach for a day trip.
They go to a shop to buy some items for the trip.









(a) Complete Enzo's bill below. [4]

Enzo's Bill		
15	Buckets	£ .....
.....	Sets of spades	£12.30
17	Toy ducks	£ .....
	Total	£ .....

(b) Enzo is given a 10% discount.
How much discount will he get? [1]

(c) Jane has £15 to spend.
The shop has a special offer on beach balls:

'Buy two get one free'

What is the maximum number of beach balls Jane can buy? [2]

Question taken from Eduqas examination paper 530002, November 2022

#18

There are:

- 28 days in February,
- 52 weeks in a year.

(a) Emile is given £8.12 pocket money every week.

How much pocket money is Emile given in a whole year? [1]

.....

(b) For this year, Catrin is given £7.35 pocket money every week.

(i) How much pocket money is Catrin given in February? [2]

.....

(ii) Catrin multiplies the total for February by 12.

This method will not give the correct amount for the whole year.
Why not? [1]

.....

.....

(c) Each morning, Aled is given 95p pocket money.
He saves all his pocket money from 1st February until the 15th March.

Will Aled have saved enough money to pay £40 for a concert ticket on the evening of the 15th March?
You must show all your working. [3]

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Question taken from Eduqas examination paper 530002, November 2019

#19 The table below shows the costs to post letters and parcels.

	Cost of posting	
	1st class	2nd class
Small letter	95p	68p
Large letter	£1.45	£1.05
Parcel	£4.45	£3.35

Use costs from the table to answer the following.

(a) Maria posts one 2nd class small letter and one 1st class parcel.
What is the total cost of posting these two items? [2]

.....

.....

(b) How much less does it cost to post three large letters 2nd class than to post three large letters 1st class? [2]

.....

.....

(c) Gareth spent £15.95 posting large letters 1st class.
How many letters did he post? [2]

.....

.....

(d) Lee has £3.50.
Does he have enough money to post five small letters?

Yes ☐ No ☐

Give the reason for your answer. [1]

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2023

Calculating with the Four Operations (Incl. Percentages): Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	6	
#2	7	
#3	10	
Total	23	

created with
eduqas Part of WJEC Question Bank

#1

Walter, Anna and Maggie all work in the same factory.

(a) Walter works for 3 hours and earns £42.

Calculate how much Walter is paid for each hour. [2]

(b) One week, Anna works for 8 hours and earns £120.
The next week, Anna works for 12 hours.

How much does Anna earn for this week? [2]

(c) Maggie earns £18 for each hour that she works.
She is given a 2% pay rise.

By how much does the amount she is paid for each hour increase? [2]

Question taken from Eduqas examination paper 530001, May 2023

#2

Adrian works in a factory.
His normal rate of pay is £14 per hour.

Adrian usually works 22 hours per week and overtime if needed.

Any overtime hours are paid at a rate of $1\frac{1}{2}$ times his normal rate of pay.

(a) One week Adrian worked for 28 hours.
Calculate Adrian's pay for this week. [4]

(b) The following week, Adrian's normal rate of pay increased.
He worked for 22 hours and was paid £330.

Show that Adrian's rate of pay increased by less than 10%. [3]

Question taken from Eduqas examination paper 530001, November 2024

#3

Nico's normal pay rate was £20 for each hour he worked.
Nico normally worked 35 hours each week.

Any extra hours Nico worked were hours of overtime.
Nico's pay rate for each hour of overtime was 1·5 times his normal pay rate.

(a) Show that Nico earns £700 in a week when he does not work any hours of overtime. [1]

(b) (i) One week, Nico worked for 38 hours.

Calculate Nico's pay for this week. [2]

(ii) The next week, Nico earned £1060.

How many hours of overtime did Nico work?
You must show all your working. [4]

(c) The following week, Nico's normal pay rate increased.
He did not work any hours of overtime.
He earned £735 for that week.

(i) Show that Nico had a pay increase of less than 6%. [2]

.....

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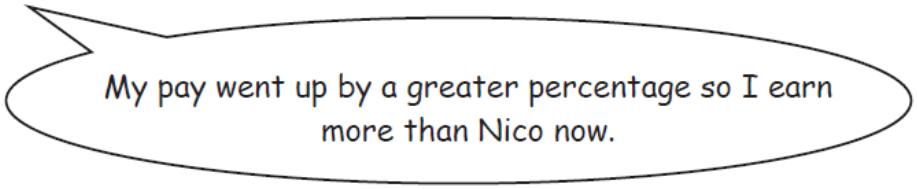
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(ii) Dana works with Nico and they work the same number of hours.
Dana had a pay increase of 6%.

She says,



Explain why Dana may not be correct. [1]

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.....

Question taken from Eduqas examination paper 530001, November 2022

Negative Numbers: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
Total	2	

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eduqas Part of WJEC Question Bank

#1

(a) In summer, the average temperature at the South Pole is –28°C.
In winter, the average temperature drops to –60°C.

(i) By how many degrees does the average temperature drop from summer to winter? [1]

.....

.....

.....

..... °C

(ii) The average winter temperature at the North Pole is 20°C warmer than the average winter temperature at the South Pole.

What is the average winter temperature at the North Pole? [1]

.....

.....

.....

..... °C

Question taken from Eduqas examination paper 530001, November 2018

Negative Numbers: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
Total	2	

created with
eduqas Part of WJEC Question Bank

#1

(a) At 8 a.m. the temperature in a new freezer is 22 °C.
The temperature decreases at 4 °C per hour.

At what time will it reach −14 °C? [2]

.....

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2020

Powers and Roots: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	2	
#6	2	
#7	3	
#8	3	
#9	4	
#10	4	
Total	22	

created with
eduqas Part of WJEC Question Bank

#1 Simplify $7\sqrt{2} \times 3$ [1]

Question taken from Eduqas examination paper 530001, November 2023

#2 (c) Write down the value of $\sqrt{49}$. [1]

Question taken from Eduqas examination paper 530001, May 2022

#3 (c) Write down the value of 8^2. [1]

Question taken from Eduqas examination paper 530001, May 2024

#4 (a) $120 = 2^3 \times 3^k \times 5$

Find the value of k. [1]

Question taken from Eduqas examination paper 530001, June 2019

#5

(a) (i) Write down the value of $\sqrt[3]{8}$. [1]

.....

.....

(ii) Simplify $\sqrt{5} \times \sqrt{5}$. [1]

.....

.....

Question taken from Eduqas examination paper 530001, November 2018

#6

(a) Lucy writes down the first five **square** numbers.
Lucy chooses two square numbers that have a difference of 12.

Which square numbers did Lucy choose? [2]

.....

.....

.....

.....

.....

The two square numbers are ..... and .....

Question taken from Eduqas examination paper 530001, November 2023

#7

(a) Teddy has to work out $\sqrt{400}$.
His answer is 200.

Is Teddy's answer correct?

Yes ☐ No ☐

Explain why. [1]

.....

.....

.....

(b) Calculate $5^3 + 5^2$. [2]

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2024

#8

Work out the value of $\frac{2^3}{6^2}$.

Give your answer as a fraction in its simplest form. [3]

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, May 2022

#9

A mathematics teacher sets a puzzle for her class.
She says:

'In my purse I have 2^3 coins.
The value of the coins in my purse is £$(3^2 + 1^3)$.
The coin with the greatest value is worth 4 times the coin with the smallest value.
What coins could I have in my purse?'

Solve the teacher's puzzle. [4]

Question taken from Eduqas examination paper 530001, June 2018

#10

(a) Simplify $5\sqrt{7}+3\sqrt{7}$. [1]

(b) Work out the value of $6+\sqrt[3]{8000}$. [1]

(c) Work out the value of $3^{20} \div 3^{18}$. [2]

Question taken from Eduqas examination paper 530001, November 2021

Using a Calculator: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	2	
#4	3	
#5	3	
#6	4	
Total	16	

created with
eduqas Part of WJEC Question Bank

#1

Calculate the value of $\frac{\sqrt{1456}}{1{\cdot}3^3 - 0{\cdot}7}$.

Give your answer correct to 1 decimal place. [2]

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2022

#2

(a) Calculate the value of $\frac{2{\cdot}6 \times 5{\cdot}7}{3{\cdot}4 - 1{\cdot}8}$.

Give your answer correct to 1 decimal place. [2]

.....

.....

.....

Question taken from Eduqas examination paper 530002, June 2022

#3

(a) Calculate $\sqrt{5 \times 3{\cdot}8} + 2{\cdot}1^2$.

Give your answer correct to 2 decimal places. [2]

.....

.....

Question taken from Eduqas examination paper 530002, June 2023

#4

(a) (i) Work out the exact value of $\frac{2{\cdot}8 + 3{\cdot}5}{8}$. [1]

.....

(ii) Write your answer correct to 2 decimal places. [1]

.....

(b) Harvey has used his calculator to work out that $23 \times 56 = 1288$.

Without using multiplication, what calculation could he do to check that this answer is correct? [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2018

#5

(a) Calculate

$$\frac{2{\cdot}4^2}{3 \times 5{\cdot}1}$$

Give your answer correct to 2 decimal places. [2]

.....

.....

.....

(b) Calculate $(1{\cdot}8 \times 10^6) \times (2{\cdot}5 \times 10^8)$ giving your answer in standard form. [1]

.....

.....

Question taken from Eduqas examination paper 530002, June 2019

#6

Harman has written some calculations he needs to work out for his homework.

Write down the calculation needed to work out each of the following using the fewest number of key presses. [4]

Give your answer to each question.

(a) 13 + 13 + 13 + 13 + 13 + 13 – 17 × 17 × 17

(b) 232 + 34% of 232

(c) 4530 – 18% of 4530

(a) .....

.....

.....

.....

Answer: .....

(b) .....

.....

.....

.....

Answer: .....

(c) .....

.....

.....

.....

Answer: .....

Question taken from Eduqas examination paper 530002, June 2019

Fractions, Decimals and Percentages: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	1	
#6	1	
#7	2	
#8	2	
#9	2	
#10	2	
#11	3	
#12	4	
Total	21	

created with
eduqas Part of WJEC Question Bank

#1

(a) Write $\frac{3}{50}$ as a percentage. [1]

.....

.....

.....

Question taken from Eduqas examination paper 530001, May 2024

#2

(a) Write down a percentage that lies between $\frac{1}{3}$ and $\frac{2}{5}$. [1]

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, June 2018

#3

(c) Write 17% as a fraction. [1]

.....

Question taken from Eduqas examination paper 530001, November 2021

#4

(b) Write 3% as a decimal. [1]

.....

.....

Question taken from Eduqas examination paper 530001, November 2020

#5

(b) Write 8% as a decimal. [1]

.....

Question taken from Eduqas examination paper 530001, November 2023

#6

(a) Circle the smallest value. [1]

$\frac{1}{2}$ 0·35 0·315 $\frac{3}{4}$ 0·6

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, May 2022

#7

(a) Write $\frac{8}{32}$ as a fraction in its simplest form. [1]

.....

.....

(b) Write $\frac{7}{25}$ as a percentage. [1]

.....

.....

Question taken from Eduqas examination paper 530001, November 2024

#8

(d) Write 0·4 as a fraction in its simplest form. [2]

.....

.....

Question taken from Eduqas examination paper 530001, May 2023

#9

(b) Write 0·31 as

(i) a fraction, [1]

.....

.....

(ii) a percentage. [1]

.....

.....

Question taken from Eduqas examination paper 530001, June 2019

#10

(b) Write 1% as

(i) a fraction, [1]

.....

.....

(ii) a decimal. [1]

.....

.....

Question taken from Eduqas examination paper 530001, June 2018

#11

Complete the table below so that each row shows a decimal and its equivalent simplified fraction.
The first row has been completed for you. [3]

Decimal	Fraction
0·5	$\frac{1}{2}$
	$\frac{7}{10}$
0·25	
0·03	
	$\frac{11}{50}$

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2024

#12

(a) Write down a decimal that is between 61% and 62%. [1]

.....

.....

.....

(b) Lea takes two science tests.

In the first test, she scores $\frac{18}{25}$.

In the second test, she scores $\frac{14}{20}$.

In which of these tests does Lea have the better result?

First test ☐ Second test ☐

Show how you decide. [3]

.....

.....

.....

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, May 2023

Fractions, Decimals and Percentages: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
Total	5	

created with
eduqas Part of WJEC Question Bank

#1

Vikram follows a Mediterranean diet.
The table below shows the proportion of each food group Vikram should eat each day.

Vikram's Mediterranean Diet

Food group	Proportion of diet
Whole grains and pasta	36%
Vegetables and fruit	30%
Fish, meat, and dairy products	20%
Olive oil	9%
Sugar	5%

(a) What **fraction** of the Mediterranean diet is made up of olive oil and sugar?
Write your answer in its simplest form. [2]

.....

.....

Question taken from Eduqas examination paper 530002, June 2024

#2

(a) 135 women and 150 men were asked to complete a survey.
44 of the women completed the survey.
32 % of the men completed the survey.

Which of the following statements is correct?
You must show all your working. [3]

A greater proportion of men than women completed the survey. ☐

A greater proportion of women than men completed the survey. ☐

.....

.....

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2020

Fractions / Percentages as Operators: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	2	
#4	2	
#5	2	
#6	2	
#7	3	
#8	3	
#9	3	
#10	3	
#11	3	
#12	4	
#13	4	
#14	4	
#15	5	
#16	5	

#17	5
#18	6
#19	6
#20	7
Total	73

created with
eduqas Part of WJEC Question Bank

#1

(c) Find $\frac{2}{9}$ of 45. [2]

.....

.....

Question taken from Eduqas examination paper 530001, November 2024

#2

(b) (i) Write $\frac{11}{25}$ as a percentage. [1]

.....

(ii) Write 87% as a decimal. [1]

.....

.....

Question taken from Eduqas examination paper 530001, May 2022

#3

(d) Work out $\frac{5}{12}$ of 24. [2]

.....

.....

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2020

#4

(b) Last year, 10% of visitors to the zoo bought a bag of animal feed.

This year the zoo expects 650 000 visitors.
How many bags of animal feed do they expect to sell this year? [2]

Question taken from Eduqas examination paper 530001, May 2024

#5

(c) Work out 5% of 32. [2]

Question taken from Eduqas examination paper 530001, June 2018

#6

(d) Work out $\frac{4}{5}$ of 45. [2]

Question taken from Eduqas examination paper 530001, June 2019

#7

(b) Work out $\frac{1}{4}$ of $\left(\frac{2}{3} \text{ of } 48\right)$. [3]

Question taken from Eduqas examination paper 530001, June 2018

#8

(b) Aroon is an architect.
One working day, he spends 324 minutes of his time on paperwork.

This is $\frac{3}{5}$ of his working day.

For how many **hours** does Aroon work on this day? [3]

Question taken from Eduqas examination paper 530001, May 2022

#9

Harry is a football player.



(a) Each training session, he spends:

- 18% of the time practising shooting
- $\frac{3}{20}$ of the time practising tackling
- the rest of the time practising passing.

What percentage of each training session does Harry spend practising passing? [3]

Question taken from Eduqas examination paper 530001, November 2024

#10

(a) Eva's grandchildren all live in Wales or Australia.

$\frac{2}{7}$ of her grandchildren live in Wales.

15 of her grandchildren live in Australia.

How many grandchildren does Eva have? [3]

..... grandchildren

Question taken from Eduqas examination paper 530001, November 2019

#11

(a) Work out each of the following.

(iii) $\frac{1}{6}$ of 42 [1]

(iv) 40% of 150 [2]

Question taken from Eduqas examination paper 530001, November 2018

#12

(b) Work out the value of the following.

$$80 + (25\% \text{ of } 48) - \left(\frac{2}{5} \text{ of } 45\right)$$

You must show all your working. [4]

Question taken from Eduqas examination paper 530001, May 2022

#13

(b) Calculate $\frac{3}{5}$ of 20. [2]

.....

.....

.....

(c) Calculate 70% of 50. [2]

.....

.....

Question taken from Eduqas examination paper 530001, May 2024

#14

(a) Work out the following.

(iii) $\frac{2}{5}$ of 30 [2]

.....

.....

.....

(iv) 30% of 70 [2]

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2023

#15

(a) One day, $\frac{5}{7}$ of the pupils in Year 10 at *North High School* went on a school trip.

There were 46 pupils in Year 10 who did not go on the trip.

How many pupils are there in Year 10 at *North High School*? [2]

(b) Alex and Mary go to *North High School.*

Alex walks $\frac{5}{8}$ of a mile to school. His friend Mary walks $\frac{7}{10}$ of a mile to school.
Mary says,

'I walk exactly $\frac{3}{40}$ of a mile more than Alex does to school.'

Is Mary correct?
Show calculations to support your decision. [3]

Question taken from Eduqas examination paper 530001, June 2018

#16

(a) Calculate 12% of £750. [2]

(b) When a fraction is added to $\frac{2}{5}$ the answer is $\frac{7}{15}$.

Find the fraction that is added. [3]

Question taken from Eduqas examination paper 530001, November 2023

#17

Matt has 120 music albums.

$\frac{3}{5}$ of his albums are CDs.

15% of his albums are vinyl records.

The rest of his albums are digital downloads.

How many of Matt's albums are digital downloads? [5]

Question taken from Eduqas examination paper 530001, November 2022

#18 (a) The cost of a games console was £342 plus 20% VAT.

What was the cost of this games console including VAT? [3]

(b)

EduTech: Tablet computer

Deposit is $\frac{1}{4}$ of the price.

Pay the balance in

6 equal monthly payments.



Andy bought a tablet computer from EduTech and paid the deposit and 6 equal monthly payments of £57.

How much was Andy's deposit? [3]

Deposit £ .....

Question taken from Eduqas examination paper 530001, May 2023

#19

(a) In 2019, the cost of a train journey was £300.
In 1979, the cost of the same train journey was 8% of the cost in 2019.

How much did the journey cost in 1979? [2]

(b)

Saver Railcard	
adult ticket:	$\frac{1}{3}$ off *
child ticket:	60% off *
**discount off normal ticket price only*	



Bob has a *Saver Railcard*.
He takes his 7-year-old grandson on a journey by train.

For this journey, the normal price of
- an adult ticket is £15,
- a child ticket is £8.

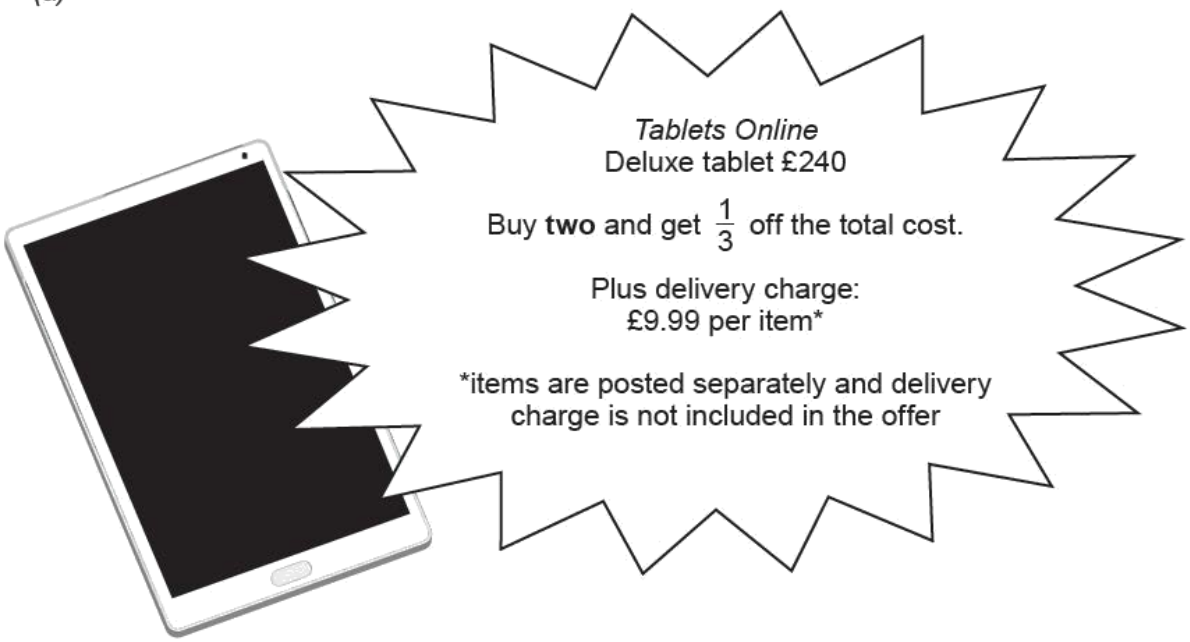
How much does Bob **save** in total when buying the two tickets using his railcard? [4]

Total saving £ .....

Question taken from Eduqas examination paper 530001, May 2022

#20

(a)

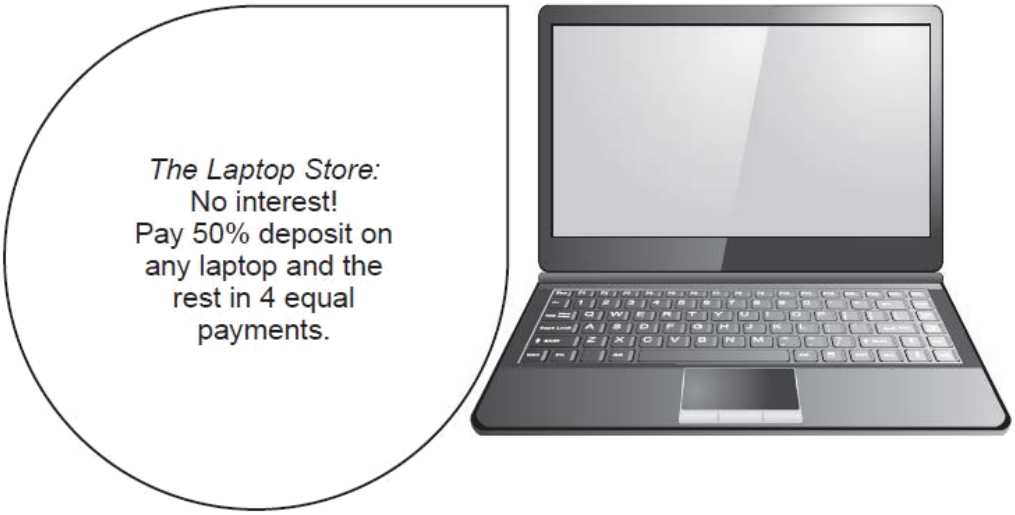


Rosie buys two Deluxe tablets from *Tablets Online* and has them delivered.

How much does Rosie pay? [4]

Rosie pays £ .....

(b)



Jim bought a laptop from *The Laptop Store*.
He paid his deposit and the rest of the cost in 4 payments of £108.

How much did Jim pay for his laptop in total? [3]

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Jim paid £ .....

Question taken from Eduqas examination paper 530001, November 2019

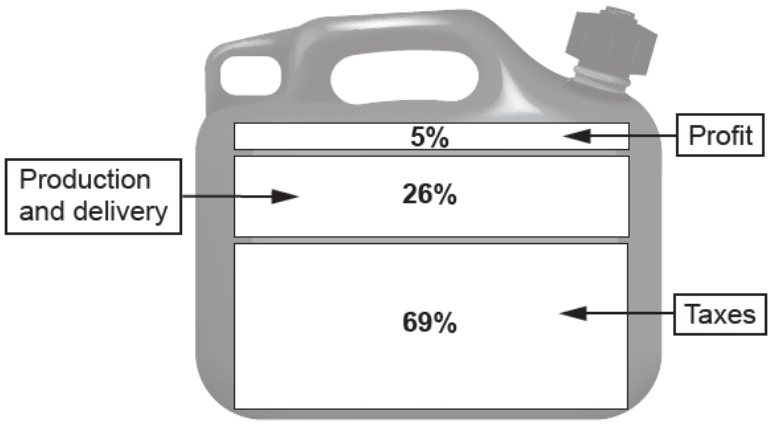
Fractions / Percentages as Operators: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
#4	3	
#5	3	
#6	3	
#7	3	
#8	4	
#9	4	
#10	5	
#11	6	
#12	6	
#13	7	
#14	8	
#15	9	
Total	69	

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eduqas Part of WJEC Question Bank

#1

(a) The price of one litre of the petrol sold at Podmore's filling station is made up as shown.



The price of one litre of petrol is 118p.

What exact amount is paid in taxes for each litre of petrol sold at Podmore's? [2]

Exact amount paid in taxes ..... p for one litre

Question taken from Eduqas examination paper 530002, November 2021

#2

(a) The original price of a car is £6500.
It is sold at a 12·5% discount.

Calculate the discounted price. [3]

Discounted price = £ .....

Question taken from Eduqas examination paper 530002, November 2020

#3

(b) 225 people took part in a different survey.
40 % were women.
20 % of the women were over 50 years of age.

How many women over 50 years of age took part in this survey? [3]

Question taken from Eduqas examination paper 530002, November 2020

#4

(b) Connor is buying a new car for £16 000.
He pays a deposit of 14% when he places his order.
He pays the rest when he collects the car.

(i) Calculate 14% of £16 000. [2]

(ii) Calculate the amount he has to pay when he collects the car. [1]

Question taken from Eduqas examination paper 530002, November 2018

#5

(b) Fruit tarts are made using strawberries and raspberries.

$\frac{5}{8}$ of the filling is strawberries.

$\frac{3}{8}$ of the filling is raspberries.

A total of 2440 g of fruit is used.
Calculate the mass of strawberries and the mass of raspberries used. [3]

Mass of strawberries ..... g

Mass of raspberries ..... g

Question taken from Eduqas examination paper 530002, November 2018

#6

(c) There are 3650 households in Lowtown.
48% of these households owe an average of £3400.

Calculate the total amount of money owed by these households. [3]

Question taken from Eduqas examination paper 530002, November 2019

#7

(b) Give calculations to show that the following statement is correct. [3]

$$18\% \text{ of } 160 \text{ is the same as } \frac{2}{3} \text{ of } 43{\cdot}2$$

Question taken from Eduqas examination paper 530002, June 2022

#8

Eight friends go to a restaurant for a meal.
The bill comes to a total of £280.

The friends agree to
- add **at least** 12% to the bill to give a tip,
- share the bill equally,
- pay a whole number of pounds.

Gordon says that each of the friends must pay £39.
Decide whether Gordon is correct or incorrect.
You must show all your working and give a reason for your answer. [4]

Question taken from Eduqas examination paper 530002, June 2018

#9

Vikram follows a Mediterranean diet.
The table below shows the proportion of each food group Vikram should eat each day.

Vikram's Mediterranean Diet

Food group	Proportion of diet
Whole grains and pasta	36%
Vegetables and fruit	30%
Fish, meat, and dairy products	20%
Olive oil	9%
Sugar	5%

(b) On Monday, Vikram ate 456 grams of fish, meat, and dairy products.
How many grams of sugar should Vikram have eaten on Monday? [2]

.....

.....

(c) On Tuesday, Vikram ate a total of 1350 grams of food.
How many grams of whole grains and pasta should Vikram have eaten on Tuesday? [2]

.....

.....

.....

.....

Question taken from Eduqas examination paper 530002, June 2024

#10

(b) Calculate 237% of 360. [2]

.....

.....

(c) Lynn is looking at a towing guide to help her choose a new car.

Safe Towing Guide		
Safe	Acceptable	Dangerous
The total mass of the trailer is less than 85% of the mass of the car.	The total mass of the trailer is between 85% and 100% of the mass of the car.	The total mass of the trailer is over 100% of the mass of the car.

The total mass of Lynn's trailer is 1750 kg.
The car that Lynn would like to buy has a mass of 2015 kg.

Is it safe, acceptable or dangerous for this car to tow her trailer?
You must show all your working. [3]

.....

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.....

.....

Circle your conclusion.

Safe Acceptable Dangerous

Question taken from Eduqas examination paper 530002, November 2018

#11 Jarrad won £3000 in a competition.

(a) He spent £500 and gave 37% of the remaining money to charity.
This was shared equally between five different charities.

How much did each charity receive? [4]

Each charity received .....

(b) Jarrad saves £600 of the £3000.
What percentage of the £3000 does Jarrad save? [2]

Jarrad saves ..... % of the £3000.

Question taken from Eduqas examination paper 530002, November 2023

#12

(a) Calculate 104% of 1240. [2]

(b) Write one of the symbols, <, > or = to make this statement true.

35% of 48 ☐ 48% of 35

Show how you decide. [2]

(c) Seren scored 19 out of 24 in her maths test.

David scored 75% in the same maths test.

Who scored a higher mark in this test?

You must show all your working. [2]

Question taken from Eduqas examination paper 530002, June 2018

#13

Malik is planning a birthday party for 25 children.
He can choose either a swimming party or an adventure centre party.

Swimming Party

£320 for 20 children.
£7.25 for each additional child.



Special Offer:
$\frac{1}{3}$ off the total cost of the party.

Adventure Centre Party

£13.60 per child.
15% off the total cost for groups of more than 20 children.



Malik works out the total cost for each party.
He chooses the cheaper of the parties.

Which party does Malik choose?

Swimming Party ☐ Adventure Centre Party ☐

You must show all your working. [7]

Swimming Party .....

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Adventure Centre Party .....

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.....

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Question taken from Eduqas examination paper 530002, November 2022

#14

Philip has 250 coins in his money box.

- 22% are £1 coins.
- $\frac{2}{5}$ are 20p coins.
- The rest are 10p coins.



(a) How many £1 coins are there in Philip's money box? [2]

(b) How many 20p coins are there in Philip's money box? [2]

(c) What is the total value of the coins in Philip's money box? [4]

Question taken from Eduqas examination paper 530002, June 2023

#15

Omar used the following recipe to make a drink to sell at a school fete.

For each glass of drink:

- use the juice of 1 orange,
- use $\frac{1}{8}$ of the juice of 1 grapefruit,
- add enough lemonade to fill the glass to 300 ml.



He squeezed:

- 68 ml of juice from each orange,
- 232 ml of juice from each grapefruit.

Omar sold 72 glasses of his drink.
The bottles of lemonade Omar used each contained 2 litres.

(a) How many bottles of lemonade did Omar need to open?
You must show all your working. [5]

..... bottles

(b) All the lemonade was donated, so cost Omar nothing.
He only paid for the fruit that he used.

The oranges cost £1.08 for a bag of 6.
The grapefruit cost 56p each.

Omar made 60% profit on each glass he sold.

What was the selling price of each glass of Omar's drink? [4]

Selling price of each glass .....

Question taken from Eduqas examination paper 530002, November 2021

Fractions: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
Total	4	

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eduqas Part of WJEC Question Bank

#1

(a) Circle **all** the fractions in the list that are equivalent to $\frac{20}{30}$. [2]

$\frac{15}{25}$ $\frac{2}{3}$ $\frac{30}{45}$ $\frac{3}{2}$ $\frac{4}{6}$

Question taken from Eduqas examination paper 530001, November 2018

#2

(b) Robin has 240 daffodils and 60 tulips.

What fraction of these flowers are daffodils?
Give your answer in its simplest form. [2]

Question taken from Eduqas examination paper 530001, November 2023

Fractions: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
Total	4	

created with
eduqas Part of WJEC Question Bank

#1

(d) There are 49 000 households in Hamborough.
21 425 households are **not** in debt.

What fraction of households in Hamborough **are** in debt? [1]

Question taken from Eduqas examination paper 530002, November 2019

#2

(b) A large jar contains 8571 jellybeans.
2857 of the jellybeans in the jar are blue.



Use one of the five options shown below to complete the sentence. [1]

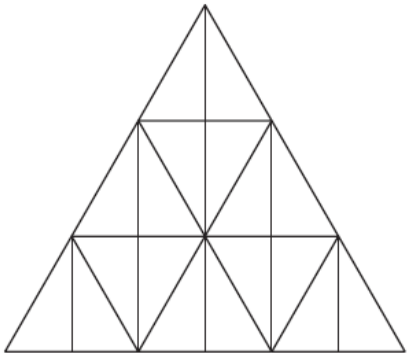
One fifth One quarter One third One half Two thirds

..... of the jellybeans in the jar are blue.

Question taken from Eduqas examination paper 530002, June 2023

#3

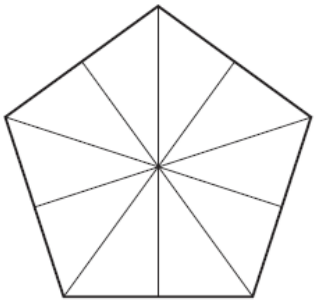
(b) Shade $\frac{1}{3}$ of the following shape. [1]



Question taken from Eduqas examination paper 530002, November 2022

#4

(b) Shade $\frac{3}{5}$ of the shape below. [1]



Question taken from Eduqas examination paper 530002, November 2023

Percentages: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	2	
Total	6	

created with
eduqas Part of WJEC Question Bank

#1

(c) Gemma was quoted £820 to have her kitchen tiled.
Tiling the hallway increased this by 70%.

By how much did her quote increase? [2]

Question taken from Eduqas examination paper 530001, November 2020

#2

(c) In the last 10 years, Dandale Karate Club has had 600 club members.
Only 6 of these have passed the grading test for black belt.

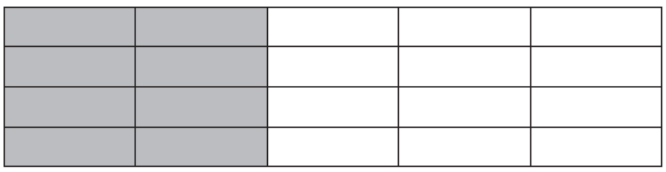
What percentage of the club members have passed the grading test for black belt in the last 10 years? [2]

..... %

Question taken from Eduqas examination paper 530001, November 2018

#3

What percentage of the following shape is shaded? [2]



Question taken from Eduqas examination paper 530001, November 2023

Percentages: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
Total	2	

created with
eduqas Part of WJEC Question Bank

#1

(c) Asha buys a bike.
She sells it for three times what she paid for it.

What percentage profit has Asha made? [1]

.....

.....

.....

.....

Percentage profit = ... %

Question taken from Eduqas examination paper 530002, November 2020

#2

(a) A newspaper headline states,

'63% of households in Barville owe money'

What percentage of households do not owe money? [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2019

Reverse Percentages: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	4	
Total	7	

created with
eduqas Part of WJEC Question Bank

#1



In a sale, jewellery is reduced in price by 40%.
The price of a ring is reduced to £1008 in the sale.

What was the price of the ring before the sale? [3]

Question taken from Eduqas examination paper 530001, November 2022

#2

(a) The price of an item in a sale has been reduced by 25%.
If the sale price is £54, what was the original price of the item? [2]

.....

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.....

(b) Percentage change can be calculated using multipliers.

(i) A number is decreased by 33% of its value.
Circle the multiplier that would find the value after this decrease. [1]

0·67 –1·33 –0·67 0·33 0·77

(ii) A number is increased by 6% of its value.
This is done 3 times, each time increasing the previous value by 6%.
Circle the multiplier that would find the value after the 3 increases. [1]

1·06 1·18 $1·06^3$ 0·18 $0·06^3$

Question taken from Eduqas examination paper 530001, May 2024

Best Buys: Non-Calculator

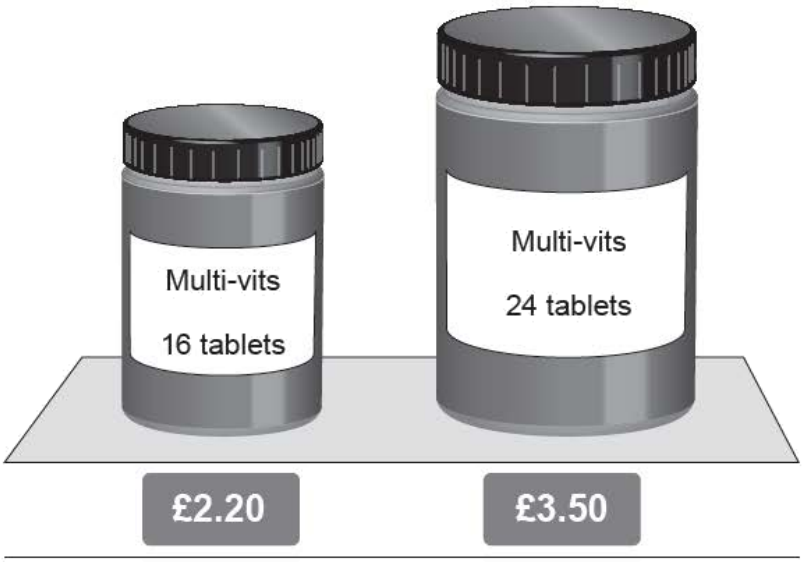
Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	4	
#4	5	
#5	5	
#6	5	
#7	5	
#8	5	
#9	6	
Total	40	

created with
eduqas Part of WJEC Question Bank

#1

A health food shop sells food supplements.

(a) Vitamin tablets are sold in two different size bottles.



Which bottle is better value for money?

16 tablets ☐ 24 tablets ☐

Show how you decide. [2]

Question taken from Eduqas examination paper 530001, November 2019

#2 A shop sells the same brand of lemonade in two different-sized bottles.



1000 ml for £2.50



300 ml for 81p

Which bottle is the better value for money?

☐ The 1000 ml bottle ☐ The 300 ml bottle

You must show all your working. [3]

Question taken from Eduqas examination paper 530001, November 2023

#3

David is shopping in a supermarket.

(a) David sees this information label on the shelf.

Flapjacks	250 grams
Our Price	**£1**
£4.00 per 100 grams	

He tells the supermarket manager that this information is wrong.

Explain why David is correct. [1]

(b) David decides to buy some ginger biscuits.
Here are his options.



Ginger Biscuits	50 biscuits
Our Price	**£1.50**



Ginger Biscuits	30 biscuits
Our Price	**£0.96**

David wants to buy the packet which is better value for money.

Which packet of biscuits should David buy?

50 biscuits ☐ 30 biscuits ☐

Show how you decide. [3]

Question taken from Eduqas examination paper 530001, May 2023

#4

(a) Ben wants to buy a football shirt with his name and a number on it.
He wants the best price he can get.

Here are his choices.





Should he buy his shirt from ***Shot On Goal*** or ***Shirts Glorious Shirts***?
Show how you decide. [3]

(b) Ben buys a season ticket to watch his team.
The ticket costs £276.
Ben chooses to pay for his season ticket in 12 monthly instalments at no extra cost.

How much does Ben pay for his season ticket each month? [2]

Ben pays £ ..... each month.

Question taken from Eduqas examination paper 530001, June 2018

#5

Cover Insurance sells insurance for laptops.
They have two offers.

Laptop insurance **Offer 1**	Laptop insurance **Offer 2**
One payment only **£60 for one whole year**	Pay monthly **12 months for £4.50 per month**

(a) Mika wants to buy insurance for his laptop.

Show that if Mika uses Offer 2 he will save 10% of the cost of using Offer 1. [3]

(b) During April, *Cover Insurance* sold 630 policies.

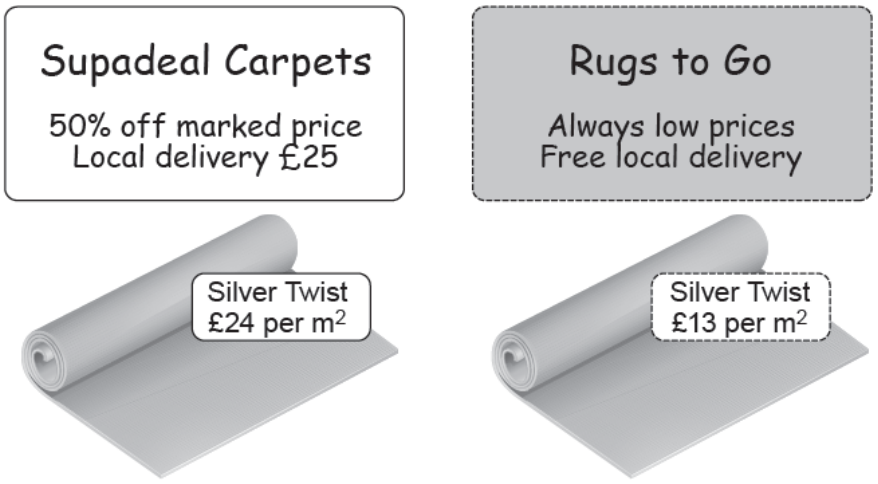
How many policies per day, on average, did they sell for this month? [2]

Question taken from Eduqas examination paper 530001, June 2019

#6

Joni is buying a Silver Twist carpet.
She needs to buy 30 m^2 and have it delivered.

Joni wants to pay the lowest total price possible.
She chooses from these two local shops.



From which shop should she buy her carpet and how much will she save by choosing this shop?
You must show all your working. [5]

She should buy from ..... and will

save £ .....

Question taken from Eduqas examination paper 530001, November 2021

#7

(a) The table shows the standard prices per night at the *Cliff Hotel* for 2022.

Dates	**Double Plus Room** (1 or 2 adults plus no more than one child)	**Family Room** (4 or 5 people)	
		Each adult	Each child
01 Mar – 31 May	£117	£63	£8
01 Jun – 31 Aug	£160	£80	£12
01 Sep – 30 Nov	£105	£57	£7

The hotel website states:

- a child must be 17 years old or less,
- a person aged 18 or more must pay the adult rate,
- a **single adult** in a double plus room pays $\frac{3}{4}$ of the standard price per night.

Mr and Mrs King are making a booking for one night in August 2022.
They will be taking their two sons, William aged 11 and Henry aged 20.

Mr and Mrs King are going to book either

- one double plus room for themselves and William and one double plus room for Henry, or
- one family room for all 4 of them.

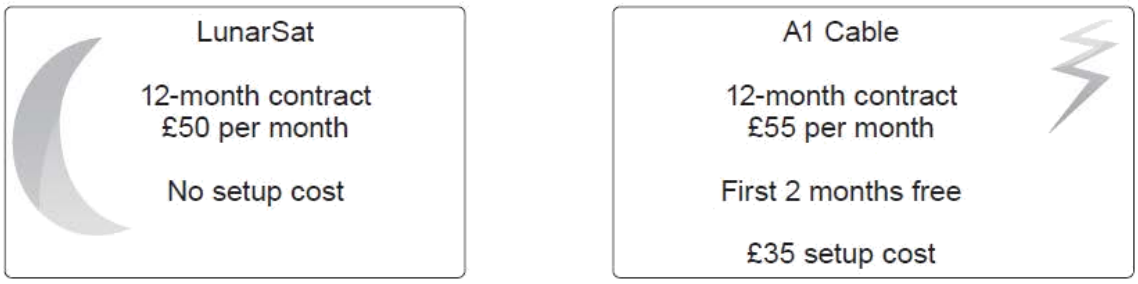
How much **more** will it cost the King family to stay for the night in two double plus rooms than it will if they stay in a family room?
You must show all your working. [5]

£ ..... more

Question taken from Eduqas examination paper 530001, November 2021

#8

Adesh wanted a 12-month internet and TV contract.
He chose the cheaper of these two deals.



Which deal did Adesh choose and how much cheaper was it? [5]
You must show all your working.

Adesh chose .....

which was £ ..... cheaper.

Question taken from Eduqas examination paper 530001, November 2020

#9 Adele and Lewis are shopping in a bakery.

(a)



Bread rolls

98p each

OR

£4.50 for a bag of 5 rolls



Adele buys a bag of 5 rolls.

How much money does she save compared to buying 5 rolls separately? [3]

(b) Croissants cost 90p each and cinnamon whirls cost £1.25 each.
Lewis buys 4 croissants and some cinnamon whirls.
Lewis has £10.

What is the greatest number of cinnamon whirls that Lewis can buy?
You must show all your working. [3]

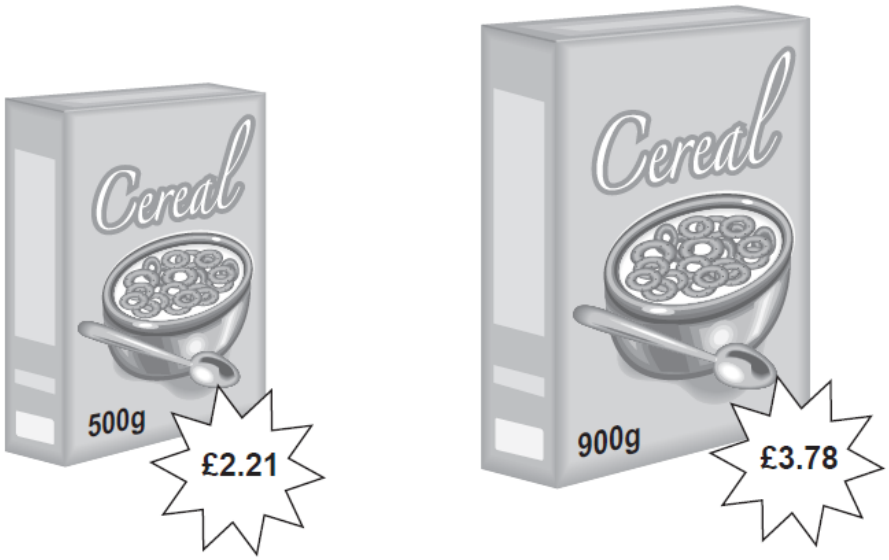
Question taken from Eduqas examination paper 530001, November 2023

Best Buys: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
#4	3	
#5	4	
#6	7	
Total	22	

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#1 A shop sells the same breakfast cereal in two different-sized boxes.



Which box is the better value for money?

500 g ☐ 900 g ☐

You must show all your working. [2]

Question taken from Eduqas examination paper 530002, November 2022

#2

Connie reads this sign at a fairground:

> Rides £4.80 each
> Buy a wristband for £6 then all rides £3 each

(b) Complete the following statement.

'It is only worth buying a wristband if you plan to go on ..... or more rides.'

You must show all your working. [3]

Question taken from Eduqas examination paper 530002, November 2018

#3

A supermarket sells bottles of the same shampoo in 3 sizes.



Which size of bottle offers the best value for money?

400 ml ☐ 700 ml ☐ 900 ml ☐

Show how you decide. [3]

Question taken from Eduqas examination paper 530002, November 2021

#4



200 ml	375 ml	500 ml
98p	£1.80	£2.30

Which size of bottle offers the best value for money?

200 ml ☐ 375 ml ☐ 500 ml ☐

Show how you decide. [3]

.....

.....

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2020

#5 The Cowell family are planning a holiday to Spain for seven days.

They can either pay for a package deal or pay for return flights, accommodation and food separately.

The costs are shown below.



Pay Separately

Return flights, accommodation, and food are free for children under 2 years old.

Return flights
£352 per person

Accommodation
£43 per person, per day

Food
£85 per person, for seven days

On the holiday there will be two adults and two children.
The children are aged 8 and 1 years old.
They each require return flights, accommodation and food.

The Cowell family wish to choose the cheaper option.

Which option should they choose?

Package Deal ☐ Pay Separately ☐

Show how you decide. [4]

Question taken from Eduqas examination paper 530002, November 2023

#6

Dexter wants to buy a games console that costs £485.



Dexter can choose from two different options to pay for the console.

Option A

Pay a deposit and the remaining balance in the following ratio:

Deposit : remaining balance = 1 : 4.

The remaining balance to be paid in 8 equal monthly payments.

Option B

Pay a 12% deposit.
The remaining balance to be paid in 10 equal monthly payments.

Dexter wants the monthly payments to be as low as possible after paying a deposit.
Which option should Dexter choose and how much will he pay each month?

You must show all your working. [7]

Option A

Option B

Dexter should choose option .....

Each month he will pay £ .....

Question taken from Eduqas examination paper 530002, November 2024

Exchange Rates: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
#3	4	
#4	5	
Total	15	

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eduqas Part of WJEC Question Bank

#1

(b) Eva lives in Wales.
When she goes to Australia for a visit, she always changes £400 into Australian dollars (A$).

When she went in 2018, the exchange rate was £1 = A$ 1.70.
When she went in 2016, the exchange rate was £1 = A$ 2.00.

How many more Australian dollars did Eva receive in 2016 than she did in 2018? [3]

A$ ..... more

Question taken from Eduqas examination paper 530001, November 2019

#2

In 2019,

- €1 = £0.90,
- $1.25 = £1.



In 2019, a silver pencil cost €110 in Germany.
The same pencil cost $125 in the USA.

In which country was the pencil cheaper?

Germany ☐ USA ☐

You must show all your working. [3]

Question taken from Eduqas examination paper 530001, May 2022

#3

James has been on holiday to the USA and is flying home to the UK.
The price of a gift in a shop at the airport is $65.
The price of the same gift online is €60 including delivery.

On the day of his flight, the exchange rates were as follows.

£0.80 = $1
£1 = €1.20

Is it cheaper to buy the gift at the airport or online?

Airport ☐ Online ☐

Show how you decide. [4]

Question taken from Eduqas examination paper 530001, May 2023

#4

Bryn lives in Canada.



When he bought a book from the UK for £240, the exchange rate was

£1 = 2.50 Canadian dollars.

When he sold the same book to a person in Japan for 162 000 Japanese yen, the exchange rate was

1 Canadian dollar = 81 Japanese yen.

Show that Bryn made more than 1000 Canadian dollars buying and selling this book. [5]

Question taken from Eduqas examination paper 530001, November 2022

Exchange Rates: Calculator

Question	Maximum Mark	Mark Awarded
#1	5	
Total	5	

created with
eduqas Part of WJEC Question Bank

#1

Abdul is travelling from the UK to Brazil for a holiday.
Abdul has £825 to exchange for Brazilian reals (R$).
The exchange rate is £1 = 6.27R$.
The bank Abdul uses to exchange his money only has 50R$ notes.

What is the maximum amount of Brazilian reals Abdul can buy and what will this cost him in pounds?
Give your answer correct to the nearest penny.
You must show all your working. [5]

Question taken from Eduqas examination paper 530002, June 2024

Bills: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	8	
Total	8	

created with
eduqas Part of WJEC Question Bank

#1

(a) The total cost of the gas Farida used in 2019 was £432.
To work out how much she should pay for gas each month in 2020, her energy company divided this amount by 12.

How much did the energy company ask Farida to pay for gas each month in 2020? [2]

(b) Mo is working out the cost of his electricity bill.

His bill is for a period of 30 days.

During these 30 days he:
- pays a fixed charge of 20 pence **per day**,
- uses a total of 500 kilowatt-hours of electricity.

Mo pays 14 pence for every kilowatt-hour of electricity he uses.
He pays VAT of 5% on the total of these costs.

How much is Mo's electricity bill? [6]

Question taken from Eduqas examination paper 530001, May 2022

Bills: Calculator

Question	Maximum Mark	Mark Awarded
#1	9	
Total	9	

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eduqas Part of WJEC Question Bank

#1

(a) The amount of electricity and gas used in a home is measured in units.

In the first week of May, the Singh family used 56 units of electricity and 245 units of gas.
The cost per unit of electricity is 32p.
The total cost for the units of electricity and gas the Singh family used in the first week of May was £39.97.

What is the cost of one unit of gas? [4]

One unit of gas costs .....

(b) The Singh family are calculating their electricity bill for the 30 days of June.

- They use 210 units of electricity in June.
- The cost per unit of electricity is 32p.
- They pay a fixed charge of 28p per day.
- VAT at 5% is added to the total of these costs.

Calculate the total cost of the Singh family's electricity bill for June. [5]

The total cost of the Singh family's electricity bill for June is .....

Question taken from Eduqas examination paper 530002, November 2023

Product of Prime Factors: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	5	
Total	10	

created with
eduqas Part of WJEC Question Bank

#1

(b) Write 168 as a product of its prime factors. [2]

Question taken from Eduqas examination paper 530001, June 2019

#2

Write 60 as a product of its prime factors in index form. [3]

60 = ...

Question taken from Eduqas examination paper 530001, November 2023

#3

(a) Write 2475 as a product of its prime factors in index form. [3]

(b) Write down the square root of $64 \times 5^4 \times 7^4$.
Give your answer as a product of prime factors in index form. [2]

Question taken from Eduqas examination paper 530001, May 2024

LCM / HCF: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
Total	5	

created with
eduqas Part of WJEC Question Bank

#1

Jamil is taking a group of students on a camping trip.

He buys tins of soup and bottles of water.
He needs to buy the same number of tins as bottles.
Tins of soup are sold in packs of 12 and bottles of water are sold in packs of 15.

What is the smallest number of packs of each that Jamil can buy? [2]

Number of **packs** of soup ..... Number of **packs** of water .....

Question taken from Eduqas examination paper 530001, June 2018

#2

(c) *LoWatts Ltd* makes light bulbs that are identical in size.

They have regular orders from *Company A* for 120 light bulbs and from *Company B* for 168 light bulbs.

LoWatts Ltd uses one size of box to supply both *Company A* and *Company B*.
Each box used contains the same number of light bulbs and is full.
The number of boxes used is as few as possible.

How many light bulbs does each box hold? [3]

Question taken from Eduqas examination paper 530001, June 2019

LCM / HCF: Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
#3	5	
#4	5	
Total	16	

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#1

(b) Bus A and Bus B both leave the station at 8:00 a.m.

Bus A returns to the station every 30 minutes.
Bus B returns to the station every 24 minutes.

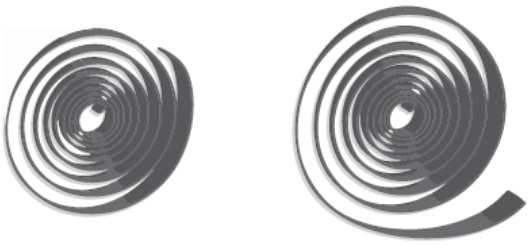
At what time will both buses next return to the station at the same time? [3]

Question taken from Eduqas examination paper 530002, June 2022

#2

Daisy owns a sweet shop.

(a) She has two rolls of liquorice.
One roll has a length of 90 cm.
The other roll has a length of 144 cm.



Daisy wants to cut these rolls into smaller pieces of equal length.

What is the **maximum** possible length of these smaller pieces that leaves no left over liquorice? [3]

The maximum possible length of the smaller pieces is ..... cm

Question taken from Eduqas examination paper 530002, November 2024

#3

Mr Gregory plans to buy drinks and crisps for the school shop.
Drinks and crisps are sold in multipacks.
The costs for these are shown below.

Drinks multipack (28 drinks)



Price: £5.35

Crisps multipack (35 packets)



Price: £4.27

Mr Gregory buys the **least** number of each multipack so that he has an equal number of drinks and packets of crisps.

How much will this cost?
You must show all your working. [5]

Total cost is .....

Question taken from Eduqas examination paper 530002, June 2024

#4

Gregor owns a restaurant.

(b) Gregor plans to buy some spoons and forks.

A bag of 24 spoons costs £19.95.
A box of 18 forks costs £15.55.
Bags and boxes cannot be split.

Gregor decides to buy the same number of spoons as forks.
He places an order to buy the smallest number of each that he can.

Complete the details on the order form shown at the bottom of the page.
You must show all your working. [5]

Order form	Cost (For the required numbers ordered)
..... bags of spoons	.....
..... boxes of forks	.....
Total cost of the complete order £	

Question taken from Eduqas examination paper 530002, November 2018

Simple Interest: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
#3	4	
Total	10	

created with
eduqas Part of WJEC Question Bank

#1

Harry is a football player.



(b) Harry borrows £80 to pay for a new pair of football boots.
Simple interest is charged at 5% per month on the money he borrowed.

Harry does not make any repayments.
After how many months will he owe £120? [3]

Question taken from Eduqas examination paper 530001, November 2024

#2

Sarah borrows £4200 from her friend at a rate of 2% simple interest per year.
She agrees to pay back the £4200 **plus** the interest in one payment at the end of 5 years.

How much should Sarah give her friend at the end of the 5 years? [3]

£ .....

Question taken from Eduqas examination paper 530001, November 2022

#3

(a) £125 is invested at a fixed percentage rate of simple interest.
In 3 years it earns £9 simple interest.

How many years in total will it take to earn £36 simple interest? [1]

..... years

(b) Jim invested £20 000 in Lulu's business.
Lulu agreed to pay Jim a fixed percentage rate of simple interest each year on his investment.
At the end of 5 years, Lulu had paid Jim a total of £4000 in interest payments.

What yearly rate of simple interest did Lulu agree to pay? [3]

..... %

Question taken from Eduqas examination paper 530001, November 2021

Simple Interest: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
Total	2	

created with
eduqas Part of WJEC Question Bank

#1

(b) Emma borrows £875 to pay for a new computer.
She pays simple interest on the loan at 6% per year for 3 years.

Calculate the total amount of interest Emma pays. [2]

.....

.....

.....

.....

Interest = £ .....

Question taken from Eduqas examination paper 530002, November 2020

Using Standard Units: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	5	
Total	5	

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eduqas Part of WJEC Question Bank

#1

Here is part of a train timetable.

Ashby	08:19
Brilfax	08:25
Chemery	08:42
Drago	09:08
Elderville	09:17

(a) How many minutes should the train journey from Brilfax to Drago take? [2]

(b) Carley lives in Ashby.
She works Monday to Friday in an office in Elderville.
Every morning she catches the 08:19 train from Ashby.

Last week the train left Ashby on time each morning.
The train was late arriving at Elderville on Monday but arrived on time on the other four days.
For the week, the total train journey time to work was 5 hours and 6 minutes.

How many minutes late was the train when it arrived at Elderville on Monday? [3]

The train was ..... minutes late on Monday

Question taken from Eduqas examination paper 530001, November 2024

Using Standard Units: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	2	
#4	4	
Total	8	

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#1

(a) A pie filling is made using 3·5 kg of apples and 475 g of blackberries.

(i) Change 3·5 kg into grams. [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2018

#2

(b) Circle the **two** lengths below that are equal. [1]

1740 mm 1740 cm 174 cm 174 m 17·4 km

.....

Question taken from Eduqas examination paper 530002, June 2022

#3

(a) A car leaves Chester at 9:27 a.m.
It arrives at Taunton at 1:13 p.m.

How long does the journey take?
Give your answer in hours and minutes. [2]

.....

.....

.....

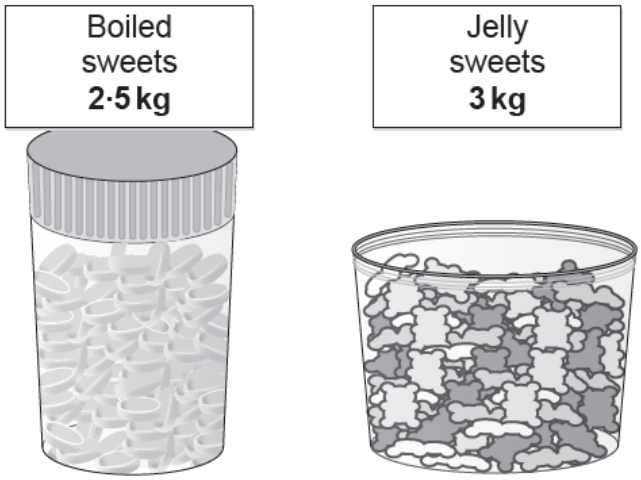
.....

..... hours ..... minutes

Question taken from Eduqas examination paper 530002, June 2022

#4

(b) Daisy has 2·5 kg jars of boiled sweets and 3 kg tubs of jelly sweets in her shop.



Half a kilogram of boiled sweets costs £4.25.
The total cost for one jar of boiled sweets and one tub of jelly sweets is £35.83.

What is the cost of 1 kg of jelly sweets? [4]

The cost of 1 kg of jelly sweets is .....

Question taken from Eduqas examination paper 530002, November 2024

Speed, Distance, Time: Calculator

Question	Maximum Mark	Mark Awarded
#1	6	
#2	4	
#3	5	
Total	15	

created with
eduqas Part of WJEC Question Bank

#1

Lynda cycles 31·5 km from home to work each day.

(a) One day, her journey to work takes her 1 hour and 45 minutes.

Calculate her average speed in km/h. [2]

(b) Lynda cycles home following the same route.
She leaves work at 4 p.m.
Her average speed on this journey is 15 km/h.

At what time does Lynda arrive home?
You must show all your working. [4]

Question taken from Eduqas examination paper 530002, November 2022

#2

The speed of a boat is measured in knots (nautical miles per hour).

Use:
1 knot = 1·852 km/h
0·625 mph = 1 km/h

A search and rescue team has a speedboat and a jet ski.
Both vehicles set off from the same boathouse at the same time to rescue a sailor.

The speedboat travels at a constant speed of 50 knots.
The jet ski travels at a constant speed of 65 mph.

The sailor is rescued by the faster vehicle 15 minutes after it left the boathouse.

Which vehicle rescued the sailor and how many kilometres did it travel from the boathouse? [4]

Rescue vehicle was .....

which travelled ..... km

Question taken from Eduqas examination paper 530002, November 2021

#3

Nadia is going to drive from her home to a meeting in Newcastle.



Her route can be approximated using a straight line.

She plans to leave home at 6 a.m.
She wants to arrive in Newcastle at 11:45 a.m.

What must Nadia's average speed be for her to get to Newcastle on time?
Give your answer in miles per hour. [5]

Question taken from Eduqas examination paper 530002, November 2020

Pressure, Force, Area: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	4	
#3	5	
Total	12	

created with
eduqas Part of WJEC Question Bank

#1

(b) Use: $\text{Pressure} = \dfrac{\text{Force (N)}}{\text{Area (cm}^2\text{)}}$

The base of the table has an area of 1600 cm^2.
Some books are also placed on the table.
The books, glass of water and table exert a pressure of 0·1 N/cm^2 on the ground.



Diagram not drawn to scale

Calculate the force exerted on the ground by the books, glass of water and table.
Assume that the whole of the base of the table is in contact with the ground.

[2]

.....

.....

.....

.....

.....

(c) In fact, the assumption made in part (b) is incorrect. Part of the base of the table is not in contact with the ground.

Describe how this changes your answer to part (b). [1]

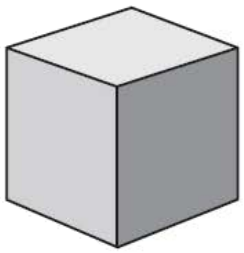
.....

.....

Question taken from Eduqas examination paper 530001, November 2022

#2

A solid cube of metal is at rest on horizontal ground.
The cube has sides of length 10 cm.



(a) Find the area of one of the faces of the cube. [1]

Area ..... cm^2

(b) The cube has a mass of 0·8 kg.

A mass of 1 kg has a weight of approximately 10 newtons.

Calculate the approximate weight of the cube. [1]

Approximate weight ..... N

(c)

$$\text{Pressure} = \frac{\text{Force}}{\text{Area}}$$

Use the given formula and your answers to *(a)* and *(b)* to find the pressure made by the cube on the ground.
Give your answer as a decimal. [2]

Pressure ..... N/cm^2

Question taken from Eduqas examination paper 530001, November 2018

#3

Use: $\text{Pressure} = \dfrac{\text{Force (N)}}{\text{Area (cm}^2\text{)}}$



A camera is attached to a tripod.
The tripod has 3 legs and stands on horizontal ground.
Each leg exerts the same pressure on the ground.

The tripod has a weight of 34 N.
The camera has a weight of 20 N.

Each foot of the tripod is a rectangle with length 3 cm and width 2 cm.

Work out the pressure exerted by the tripod and camera on the ground.
You must show all your working. [5]

Pressure = ... N/cm^2

Question taken from Eduqas examination paper 530001, November 2020

Pressure, Force, Area: Calculator

Question	Maximum Mark	Mark Awarded
#1	4	
Total	4	

created with
eduqas Part of WJEC Question Bank

#1

Use:

$$\text{Pressure} = \frac{\text{Force (N)}}{\text{Area (cm}^2\text{)}}$$



The base of a filing cabinet is a rectangle. It measures 45 cm by 60 cm.
The whole of the base is in contact with the horizontal ground.

(a) The empty filing cabinet exerts a force of 675 N on the ground.

What is the pressure exerted on the ground by the empty filing cabinet?
Give your answer in N/cm^2. [2]

(b) When the filing cabinet is full, the pressure it exerts on the ground is 0·75 N/cm^2.

What is the force that the full filing cabinet exerts on the ground?
Give your answer in newtons (N). [2]

Question taken from Eduqas examination paper 530002, June 2023

Density, Mass, Volume: Non-Calculator

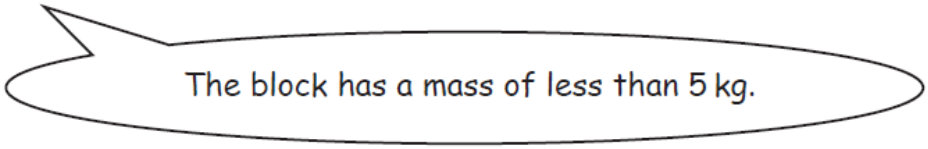
Question	Maximum Mark	Mark Awarded
#1	3	
Total	3	

created with
eduqas Part of WJEC Question Bank

#1

Izaan has a block of stainless steel with volume 700 cm^3.
The stainless steel has a density of 7·5 g/cm^3.

Izaan says,



Is Izaan correct? [3]

☐ Yes ☐ No ☐ Cannot tell

Show how you decide.

Question taken from Eduqas examination paper 530001, November 2023

Density, Mass, Volume: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	4	
#3	4	
Total	10	

created with
eduqas Part of WJEC Question Bank

#1

The density of glass in a bottle is 2·4 g/cm^3.
The volume of glass used to make the bottle is 13·4 cm^3.

Calculate the mass of the glass bottle.
Give your answer in grams. [2]

Mass ..... g

Question taken from Eduqas examination paper 530002, June 2019

#2

Adanna wants to buy a ring.



The ring she wants has a mass of 12 g when made from gold.
The density of the gold in the ring is 19·32 g/cm^3.

The same ring could also be made from silver.
The density of the silver in the ring would be 10·48 g/cm^3.

Calculate the difference in the masses of the two rings. [4]

Difference in mass is ..... g

Question taken from Eduqas examination paper 530002, June 2018

#3

The density of copper is 8·96 g / cm^3.
A solid copper statue has a volume of 1540 cm^3.
Calculate its mass in kilograms.
Give your answer correct to two significant figures. [4]

Mass = ... kg

Question taken from Eduqas examination paper 530002, November 2024

Proportion: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
#4	3	
#5	3	
#6	3	
#7	3	
#8	3	
#9	4	
#10	5	
#11	6	
#12	8	
Total	46	

created with
eduqas Part of WJEC Question Bank

#1

When they were students, Paige and Anja had part-time jobs.

(a) One week, Paige earned £51 at a rate of £8.50 per hour.
For how many hours did Paige work? [2]

Question taken from Eduqas examination paper 530001, November 2021

#2

It takes 2 hours to empty 8 identical tanks of water using 9 identical pumps.

How long would it take to empty 2 of these tanks using 3 of these pumps? [3]

Question taken from Eduqas examination paper 530001, November 2023

#3

6 printers take 36 minutes to print a number of identical booklets.
How long will it take 9 printers to print **half** as many of these booklets?
You may assume that all printers print at the same rate. [3]

Question taken from Eduqas examination paper 530001, May 2024

#4

Chris and Sue are buying some items for their vegetable garden.

(a)



Vegetable Plants

£1.99 for a single strip
OR
£7.50 for a box of 5 strips



Chris buys a box of vegetable plants.

How much money does he save compared to buying 5 single strips? [3]

Question taken from Eduqas examination paper 530001, November 2020

#5

Huw has a maths test.

(b) The second question is:

> The only food provided for guests at Seaview Hotel is breakfast. The hotel has enough food to make breakfast for 20 guests for 6 days.
> How long would the food last 30 guests?
> You may assume each guest eats the same amount of food for breakfast.

Here is Huw's working.



(i) Without working out the correct answer, explain why Huw's answer of 9 days is incorrect. [1]

.....

.....

(ii) Work out the correct answer. [2]

.....

.....

.....

.....

.....

..... days

Question taken from Eduqas examination paper 530001, November 2019

#6

The organiser of a teachers' conference provided a buffet lunch made by a catering service.

(b) The buffet food was placed on 3 large tables, one for meat, one for vegetarian and one for vegan dishes.
Teachers chose their food from one of these tables.

The numbers of teachers per minute who chose food from the table of meat dishes and the table of vegetarian dishes is shown below.

Table	*Meat*	*Vegetarian*	*Vegan*
Number of teachers per minute	8	4	

After 5 minutes, 95 teachers had chosen their food.

How many teachers per minute chose their food from the table of vegan dishes?
You may assume that the teachers chose their food at a constant rate. [3]

..... teachers per minute

Question taken from Eduqas examination paper 530001, November 2019

#7

In a factory, 6 identical machines can make 3000 erasers in 2 hours.

How long would it take 8 of these machines to make 1000 erasers? [3]

Question taken from Eduqas examination paper 530001, May 2022

#8

A wind turbine generates 390 units of electricity per hour.

How many units of electricity will this turbine generate if it continues at this rate for 2 hours and 20 minutes? [3]

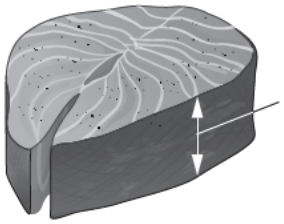
Units of electricity generated = ...

Question taken from Eduqas examination paper 530001, November 2023

#9

(a) Katy uses the following rule for cooking frozen fish.

- Measure the fish in cm at its thickest point.
- Cook frozen fish for 8 minutes per cm.
- Turn the fish over halfway through the cooking time.



Katy cooks a piece of frozen fish that measures 3 cm at its thickest point.

After how many minutes should Katy turn her piece of fish over? [2]

(b) Sajid uses the following rule for cooking fresh fish.

- Measure the fish in cm at its thickest point.
- Cook fresh fish for 4 minutes per cm.
- Add an extra 5 minutes to the cooking time for fish wrapped in foil.

Sajid cooks a piece of **fresh** fish that he has wrapped in foil.
He uses the rule and cooks his fish for a total of 31 minutes.

How thick was Sajid's fish at its thickest point before he cooked it? [2]

Question taken from Eduqas examination paper 530001, November 2021

#10

Kristoff is a baker.
He is baking bread.
The flour that he needs is sold in bags of two different sizes:

- Large bags contain 2·5 kg.
- Small bags contain 1·5 kg.



2·5 kg costs £1.10.



1·5 kg costs £0.80.

Diagram not drawn to scale

30 of the large bags contain **exactly** the quantity of flour that Kristoff needs.
The local supplier only has the small bags in stock.

Kristoff buys exactly the quantity of flour he needs in small bags.
How much more will he pay than if he bought the same quantity in large bags?
You must show all your working. [5]

Kristoff will pay ..... more.

Question taken from Eduqas examination paper 530001, November 2024

#11

Alan builds a model of a steam train.



The scale he uses is 1 cm represents 75 cm.

(a) The width of a wheel on Alan's model is 3 cm.

What is the width of a wheel on the steam train? [2]

(b) The length of the whistle on the steam train is 375 millimetres.

What is the length of the whistle on Alan's model train?
Give your answer in centimetres. [3]

(c) Alan's model train has 6 wheels.
Alan's friend Mandy says,

"The steam train has 6 × 75 = 450 wheels."

Explain why Mandy is not correct. [1]

Question taken from Eduqas examination paper 530001, November 2022

#12

Neil makes jewellery.
Last year he sold all the necklaces he made for a total of £10 800.

(a) He made necklaces for 48 weeks and sold them all for £9 each.

How many necklaces did Neil make each week?
You may assume he made the same number of necklaces each week. [4]

..... necklaces

(b) Neil also makes rings.
Last year, for 246 days, he made one ring each day.
He sold all these rings for £54 each.

How much **more** did Neil receive last year from selling rings than he did from selling necklaces? [4]

Neil received £ ..... more

Question taken from Eduqas examination paper 530001, May 2023

Proportion: Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	4	
#3	4	
#4	4	
#5	5	
#6	6	
#7	7	
Total	33	

created with
eduqas Part of WJEC Question Bank

#1

Fabric is sold from rolls.
All the rolls contain fabric of the same width.
Any length can be cut from a roll of fabric.



Tien buys:

- a 1·8 m length of flowered fabric,
- a 3·2 m length of plain fabric.

Flowered fabric costs £12.50 for one metre.
Tien spends £58.50 altogether.

Show that plain fabric costs £11.25 for one metre. [3]

Question taken from Eduqas examination paper 530002, November 2020

#2





Zahra buys 2·3 kg of parsnips and 3·5 kg of potatoes.
These cost a total of £6.23.
1 kg of potatoes costs £1.32.

What is the cost of 1 kg of parsnips? [4]

1 kg of parsnips costs .....

Question taken from Eduqas examination paper 530002, June 2022

#3

Simon is ironing shirts.
It takes him 15 minutes to iron 2 shirts.

(a) How long would it take Simon to iron 26 shirts?
Give your answer in hours and minutes. [2]

.....

.....

..... hours ..... minutes

(b) What assumption have you made in answering part *(a)*? [1]

.....

.....

(c) If this assumption were not correct, what effect would this have on your answer to part *(a)*? [1]

.....

.....

Question taken from Eduqas examination paper 530002, June 2018

#4

A bar of chocolate contains 80 g of fat.

The chocolate bar is divided into 32 pieces.

(a) How many grams of fat are in 5 pieces of chocolate? [2]

.....

.....

.....

(b) (i) What assumption did you make about the pieces of chocolate? [1]

.....

.....

(ii) If you had not made this assumption, how would the answer to *(a)* be different? [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2018

#5

(b) Mr and Mrs Joshi are refuelling their cars at Jimson's filling station.

One litre of diesel costs £1.35.

Mr Joshi puts 51 litres of diesel in his car.
Mrs Joshi puts 48 litres of petrol in her car.

The **total** cost of Mr and Mrs Joshi's fuel is £130.29.



What is the cost of one litre of petrol at Jimson's filling station? [5]

One litre of petrol costs £ .....

Question taken from Eduqas examination paper 530002, November 2021

#6

Below is a recipe to make a batch of 12 flapjacks.

Makes 12 flapjacks

240 g of porridge oats
125 g of butter
100 g of brown sugar
2 tablespoons of golden syrup

(a) Complete the table to show how much of each ingredient would be needed to make 72 flapjacks. [2]

Makes 72 flapjacks

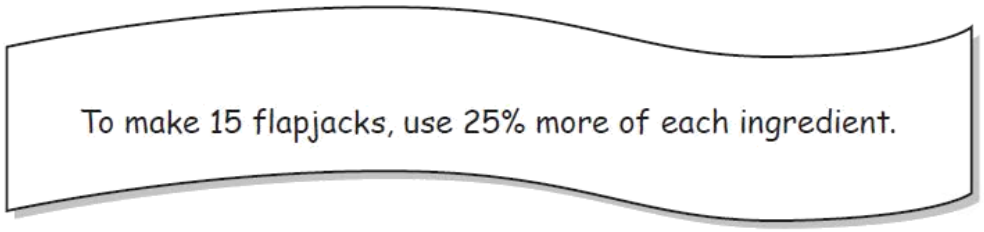
..... g of porridge oats
..... g of butter
..... g of brown sugar
..... tablespoons of golden syrup

(b) Anatoly has 1·75 kg of butter and plenty of the other ingredients.

What is the greatest number of batches of 12 flapjacks Anatoly can make? [3]

Anatoly can make ..... batches of 12 flapjacks.

(c) This note is written underneath the original recipe.



Show that this statement is correct. [1]

.....

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Question taken from Eduqas examination paper 530002, June 2022

#7

Anne is using an old recipe to make Bolognese sauce.

Bolognese *sauce* Serves 6	
$1\frac{1}{2}$ lb	beef
13 oz	tomatoes
2	onions
3	cloves of garlic

She knows that;

1 pound (lb) = 16 ounces (oz),
1 ounce (oz) is approximately equal to 28 grams (g).

(a) Show that the quantity of beef needed is 672 grams. [2]

(b) How much beef is needed to make enough Bolognese sauce for 8 people? Give your answer in grams. [2]

(c) If Anne uses 728g of tomatoes, how many servings is she making? [3]

Question taken from Eduqas examination paper 530002, June 2018

Ratio: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	2	
#3	3	
#4	3	
#5	3	
#6	3	
#7	3	
#8	3	
#9	4	
#10	4	
#11	4	
#12	4	
#13	5	
#14	5	
#15	5	
#16	6	
#17	6	

#18	6
#19	7
#20	7
Total	84

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#1

(c) Some rose bushes are divided equally between 2 gardeners.

Write this division as a ratio. [1]

.....

.....

..... : .....

Question taken from Eduqas examination paper 530001, November 2023

#2

Ivy mixes lemon juice, pineapple juice and orange juice in the ratio 1 : 2 : 7 to make a fruit drink.
Ivy has 330 ml of her fruit drink in a glass.

How much pineapple juice is in Ivy's glass? [2]

.....

.....

.....

..... ml

Question taken from Eduqas examination paper 530001, November 2023

#3

A glass of water is placed on a small table. The table stands on horizontal ground.

(a) The total mass of the table and the glass of water is 9·6 kg.

You are given the ratios,

mass of table : mass of glass of water = 11 : 1,
mass of empty glass : mass of water = 3 : 5.



Diagram not drawn to scale

What is the mass of the empty glass? [3]

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Question taken from Eduqas examination paper 530001, November 2022

#4

(a) Lisa, Flynn and Jane each have a number of marbles.

Jane has 8 marbles.

Jane has half as many marbles as Flynn.
Flynn has 4 times as many marbles as Lisa.

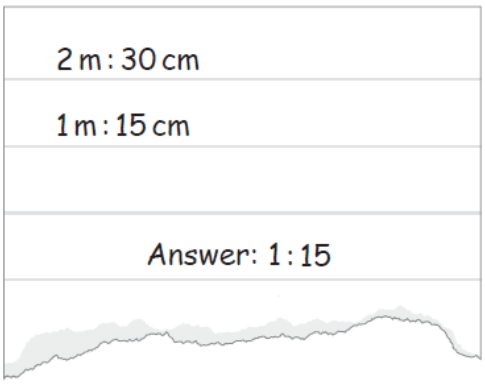
Write the numbers of marbles they each have as a ratio.
Give your answer in its simplest form. [2]

.....

.....

Lisa : Flynn : Jane = ... : ..... : .....

(b) Siân is trying to write 2 m to 30 cm as a ratio in its simplest form.
Here is her working.



Explain why Siân's answer is **not** correct. [1]

.....

.....

.....

Question taken from Eduqas examination paper 530001, May 2024

#5

(d) Simon, Anil and Josh are all members of Dandale Karate Club.

Simon is the oldest club member and Anil is the youngest club member.
Simon is 12 times as old as Anil.

(i) Complete the ratio. [1]

Simon's age : Anil's age

..... : .....

(ii) Simon is 60 years old.
Josh is 3 times as old as Anil.

How old is Josh? [2]

.....

.....

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.....

Josh is ..... years old.

Question taken from Eduqas examination paper 530001, November 2018

#6

When they were students, Paige and Anja had part-time jobs.

(b) Anja worked as a carer at weekends.
Her rate of pay for the daytime was £12 per hour.
Her rate of pay for the night-time was £9 per hour.

(ii) Last weekend, her total daytime pay and her total night-time pay were in the ratio

total daytime pay : total night-time pay = 4 : 1.

She earned a total of £360.

How many night-time hours did she work last weekend? [3]

Question taken from Eduqas examination paper 530001, November 2021

#7

Lena makes a fruit drink by mixing orange juice, pineapple juice and sparkling water in the ratio

orange : pineapple : water = 3 : 2 : 7.

(a) What fraction of the mix is water? [1]

(b) Lena pours 300 ml of her fruit drink into a glass.

How much pineapple juice is in Lena's glass? [2]

..... ml

Question taken from Eduqas examination paper 530001, November 2020

#8 The lengths of the three sides of a triangle are in the ratio 3 : 5 : 7.

(a) What fraction of the perimeter is the longest side of this triangle? [1]

(b) The perimeter of this triangle is 60 cm.

Find the length of each of the three sides of this triangle. [2]

..... cm, ... cm, ... cm

Question taken from Eduqas examination paper 530001, May 2023

#9

A catering company made 40 trays of sandwiches for a party buffet.
Each tray contained the same number of sandwiches.

They made trays of egg, trays of cheese and trays of meat sandwiches in the ratio

egg : cheese : meat = 1 : 3 : 4.

At the end of the party, 20% of the egg sandwiches, 10% of the cheese sandwiches and 25% of the meat sandwiches were uneaten.

How many trays of sandwiches were uneaten? [4]

..... trays of sandwiches

Question taken from Eduqas examination paper 530001, November 2021

#10

The organiser of a teachers' conference provided a buffet lunch made by a catering service.

(a) The catering service made a total of 560 cups of tea and coffee.
These were served in the ratio 5 : 3 respectively.

The catering service billed the conference organiser £1 for each cup of tea and £1.50 for each cup of coffee served.

How much was the total bill for the tea and coffee? [4]

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Total bill for tea and coffee £ .....

Question taken from Eduqas examination paper 530001, November 2019

#11

Gemma has her kitchen floor tiled.
The pattern is made up of 80 cream tiles and 24 green tiles.

(a) Write the ratio of cream tiles to green tiles in its simplest form. [2]

cream tiles : green tiles = ... : .....

(b) Gemma then has her hallway tiled with cream tiles.
For the kitchen **and** hallway, the ratio of cream tiles : green tiles is 19 : 3.

How many cream tiles were used altogether to tile the kitchen **and** hallway? [2]

Question taken from Eduqas examination paper 530001, November 2020

#12

Three friends, Louis, Krystal and Jamal win some money in a competition.
They share the money in the ratio 3 : 7 : 11.

(a) What fraction of the total money won is given to Jamal? [1]

(b) **Jamal** spends £45 of the money he won.
He now has exactly twice as much as **Louis** won.
How much money did **Krystal** win? [3]

Question taken from Eduqas examination paper 530001, May 2024

#13

Gary owns a garage selling second-hand cars. On Saturday, he had 72 petrol cars and 48 diesel cars for sale.

(a) Write the number of petrol cars to the number of diesel cars as a ratio in its simplest form. [2]

(b) What percentage of cars are diesel? [3]

Question taken from Eduqas examination paper 530001, November 2023

#14

Ivan is part of a team making bags of free items to give away at a college open evening.

He has:

- 140 discount vouchers,
- 56 pencils,
- 280 sweets

to share between all his bags.

He uses **all** the vouchers, **all** the pencils and **all** the sweets.
He makes as many bags as possible.
The contents of each bag are the same.

How many bags does Ivan make and what does each bag contain? [5]

Ivan makes ..... bags containing

..... vouchers, ... pencils, ... sweets.

Question taken from Eduqas examination paper 530001, November 2020

#15



(a) There are between 30 and 40 marbles in a bag.
Amy and Beatrice share the marbles in the ratio 1 : 8.
There are no marbles left in the bag.

How many marbles does Amy have? [2]

Amy has ..... marbles

(b) Chloe and Davina have a different bag of marbles.
They share their marbles in the ratio 3 : 5.
Davina gets 30 more marbles than Chloe.

How many marbles do they each get? [3]

Chloe gets ..... marbles

Davina gets ..... marbles

Question taken from Eduqas examination paper 530001, November 2024

#16

(b) Anna and Tom work part-time at the garden centre.
The number of hours they each work is in the ratio 3 : 5.
Tom works for 25 hours each week.

(i) Work out the **total** number of hours Anna and Tom work each week. [2]

(ii) Anna earns £156 each week.

How much does Anna earn per hour? [2]

(iii) Tom gets a pay **increase** of £1 per hour.
His hours remain the same and he now earns £175 per week.

How much did Tom earn per hour **before** his pay increase? [2]

Question taken from Eduqas examination paper 530001, June 2018

#17

(a) Simplify the following ratio, [2]

$15\,cm^2 : 300\,mm^2$

(b) Sura is making a cake. The main ingredients are flour, sugar and dried fruit.
She uses these ingredients with their masses in the ratio 5 : 3 : 7.

(i) What fraction of the main ingredients is the mass of the dried fruit? [1]

(ii) The combined mass of the flour and sugar is 560 g.
What is the mass of the dried fruit? [3]

Question taken from Eduqas examination paper 530001, November 2024

#18

Viola is arranging some paving slabs to make a path **all around** a rectangular pond.
Some of the slabs are grey and some are white.
There are no gaps between the slabs and no gaps between the slabs and the edge of the pond.
The diagram shows how she positions her first three slabs.

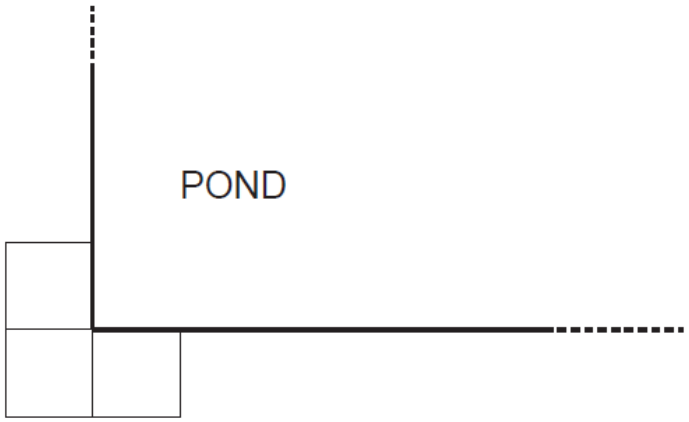


Diagram not drawn to scale

The ratio of grey slabs : white slabs is 3 : 1.

The pond is 2·5 metres by 3·5 metres.
Each slab is a square with side 50 centimetres.

A grey slab costs £5 and a white slab costs £6.

How much does it cost Viola to make her path? [6]

Question taken from Eduqas examination paper 530001, May 2023

#19

Steph is a baker.

(a) She bakes 42 white rolls and 60 brown rolls.

Write the ratio of white rolls to brown rolls in its simplest form. [2]

white rolls : brown rolls = ... : .....

(b) Steph makes scones in three flavours: cheese, fruit and plain.
She makes:

- 4 times as many fruit scones as cheese scones,
- 3 times as many plain scones as cheese scones.

She sells each scone for the same price.
She makes a total of £96 from the sale of all the scones.

How much does she make from the sale of the plain scones? [3]

(c) Steph makes and sells birthday cakes.
Each cake costs £54 to make.
She makes a profit of 15% on each cake.

What is the selling price of Steph's birthday cakes? [2]

Selling price = £ .....

Question taken from Eduqas examination paper 530001, June 2019

#20

(a) Theo invests £45 000 and Jenny invests £35 000 in a new business.

(i) Write the ratio of Theo's investment to Jenny's investment in its simplest form. [2]

Theo : Jenny = ... : .....

(ii) At the end of the first year, Theo and Jenny shared the total profit made by the business in the ratio of their original investments.
Jenny made £21 000 profit.

What is the difference in the amount of profit made by Theo and Jenny? [3]

(b) The next year, the business makes a loss and Jenny decides to sell her share.
She loses all of her profit from the first year plus $\frac{3}{10}$ of her original investment.
Calculate the amount of money Jenny loses. [2]

Question taken from Eduqas examination paper 530001, May 2022

Ratio: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
#4	3	
#5	3	
#6	3	
#7	4	
#8	4	
#9	5	
#10	6	
Total	36	

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#1

A length of wire is cut into 3 pieces.
The 2 shortest pieces are the same length.
The longest piece is 3 times the length of each of the shortest pieces.

(a) Write down the ratio of the lengths of the 3 pieces of wire. [1]

.....

.....

(b) What fraction of the original length of wire is the longest piece? [1]

.....

.....

Question taken from Eduqas examination paper 530002, November 2018

#2

(a) A pie filling is made using 3·5 kg of apples and 475 g of blackberries.

(i) Change 3·5 kg into grams. [1]

.....

.....

(ii) Write the quantity of apples to the quantity of blackberries as a ratio, in its simplest form. [2]

.....

.....

Question taken from Eduqas examination paper 530002, November 2018

#3

A statue in a museum is made from copper, tin and zinc in the ratio 65 : 14 : 9.



There are 27 kg of zinc in the statue.

The museum crane cannot lift more than $\frac{1}{4}$ tonne.

Is it possible for this crane to lift this statue?

You must show all your working and give a reason for your answer. [3]

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Reason:

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Question taken from Eduqas examination paper 530002, June 2018

#4

Jan, Freda and Pieter share some money.

Freda gets 3 times as much as Jan.
Pieter gets half as much as Freda.

(a) Write down the ratio of the amounts of money that they each get.
Give your answer in its simplest form. [2]

.....

.....

.....

Jan : Freda : Pieter = ... : ..... : .....

(b) What fraction of the money does Pieter get? [1]

.....

.....

.....

Question taken from Eduqas examination paper 530002, June 2022

#5

(a)

Recipe for scones	
Ratio of ingredients flour : butter : sugar 70 : 17 : 10	

Nadeen has 102 g of butter and plenty of flour and sugar.
Nadeen uses all this butter to make scones.

Calculate the quantity of flour and sugar Nadeen needs. [3]

.....

.....

.....

.....

Flour ..... g

Sugar ..... g

Question taken from Eduqas examination paper 530002, November 2019

#6

Nathan and Lucy make and sell wooden items for gardens.

(a) Nathan makes and sells benches, tables and tool sheds.
Last year, the profit he made from selling these items was in the following ratio.

benches	:	tables	:	tool sheds
2	:	3	:	7

(i) What fraction of his profit did Nathan make from selling benches and tables? [1]

.....

.....

.....

(ii) His total profit was £18 072.

How much profit did Nathan make from the sale of tool sheds? [2]

.....

.....

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2022

#7

(a) Sam and Jody share £366 in the ratio 1 : 3.

How much money does Jody get? [2]

.....

.....

.....

.....

Jody gets £ .....

(b) Maria is 4 years old.
She is half Connor's age.

What will be the ratio of their ages in 2 years' time?
Give your answer in its simplest form. [2]

.....

.....

.....

Maria's age : Connor's age will be ..... : .....

Question taken from Eduqas examination paper 530002, November 2020

#8

Frank is making some fruit drinks.

(a) Frank makes one drink using orange juice and lemonade in the ratio 1 : 5.
He pours 390 ml of this drink into a glass.

How many ml of lemonade will there be in the glass? [2]

(b) Frank makes a different drink using apple juice and lemonade.
He pours 120 ml of apple juice into a glass.
He then pours lemonade into the glass until there is 390 ml of drink.

Write down the ratio of apple juice to lemonade in the glass.
Give your answer in its simplest form. [2]

The ratio is ..... : .....

Question taken from Eduqas examination paper 530002, June 2024

#9

Tomas and Ada are making models.

(a) Tomas is making a model car using the ratio 1 : 18.

(i) A windscreen wiper on the model has a length of 2·8 cm.

What is the length of the windscreen wiper on the actual car? [1]

.....

.....

.....

..... cm

(ii) The maximum height of the actual car is 1·53 m.
Tomas tries to work out the maximum height of the model.
Here is his method.

$1530 \div 18 = 85$ cm

Is Tomas' method correct?

Yes ☐ No ☐

Explain how you decide. [1]

.....

.....

(b) Ada makes a model boat.
She then paints her model.

It takes her twice as long to make her model as it does to paint it.

(i) Complete the ratio. [1]

make : paint = ... : .....

(ii) Ada takes a total of 114 hours to make and paint her model.

How many hours does it take Ada to make her model? [2]

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2021

#10

(a) A factory sells paint in different size tins.

The square label on a small tin has a height of 6cm.
The square label on a large tin has a height of 15cm.



Diagram not drawn to scale

Complete this statement:

The large label is an enlargement of the small label

using a scale factor of .....

[1]

(b) The factory makes orange paint by mixing yellow paint and red paint.

On Monday, they use 66 litres of yellow paint and 99 litres of red paint.
On Tuesday, they use 264 litres of yellow paint.

How many litres of red paint must be used on Tuesday to make the same colour of orange? [2]

.....

.....

.....

.....

.....

(c) Three friends buy some paint.

- Murphy buys 5 litres of paint.
- Jane buys 3 times as much paint as Murphy.
- Alexei buys half as much paint as Jane.
- Paint costs £4.95 for half a litre.

Calculate the total cost of the paint. [3]

.....

.....

.....

.....

.....

.....

The total cost of the paint is £ .....

Question taken from Eduqas examination paper 530002, November 2019

Growth / Decay: Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
#3	4	
#4	4	
#5	5	
#6	5	
#7	6	
#8	7	
Total	37	

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#1

Tori's grandfather buys a gold coin for her on the day she is born.
The coin costs £130.
The value of the coin is expected to increase by 6% each year.

What value is the coin expected to have on Tori's 10th birthday?
Give your answer correct to the nearest penny. [3]

Expected value of the coin £ .....

Question taken from Eduqas examination paper 530002, November 2021

#2

This motorcycle depreciates by 16% per annum.



Motorcycle now worth £2500

After how many whole years will this motorcycle be worth less than £1000?
You must show all your working. [3]

Motorcycle will be worth less than £1000 after ..... whole years.

Question taken from Eduqas examination paper 530002, June 2019

#3

Lucy bought a car 9 years ago for £12250.



The car depreciated in value by 18% in the **first** year.
In each of the following years, her car depreciated by 15% of its previous year's value.

By how much has the car decreased in value in the last 9 years? [4]

Lucy's car has decreased in value by .....

Question taken from Eduqas examination paper 530002, November 2023

#4

Janet invests £5000 in a savings account for 9 years.
She makes no further payments into or out of her account in this time.

For the first 5 years, her investment earns 2% compound interest per year.
After this, the interest rate decreases to 1·3% compound interest per year.

How much is Janet's investment worth at the end of the 9 years? [4]

Question taken from Eduqas examination paper 530002, November 2022

#5

When a ball is dropped, the maximum height it reaches after each bounce decreases.

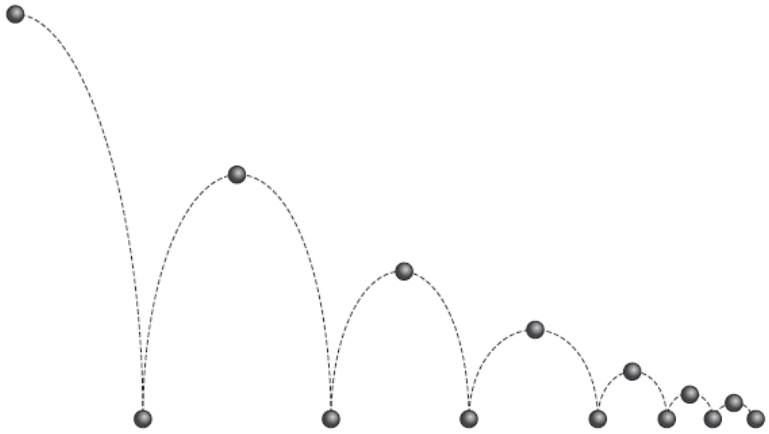


Diagram not drawn to scale

Maddox says,

Each time the ball bounces it reaches a height that is 55% of the maximum height reached on its previous bounce.

(a) The ball is dropped from a height of 4 m.

What height will the ball reach above the ground after its 7th bounce? [3]

(b) (i) State any assumptions you have made in answering part (a). [1]

(ii) What effect could your assumption have on your answer to part (a)? [1]

Question taken from Eduqas examination paper 530002, June 2024

#6



Edudig Digger
£35 950

Samir buys this digger and expects to use it for 1250 hours each year.
The digger will decrease in value at a yearly rate of 18% of its value at the end of the previous year.

Use this information to calculate the decrease in value of Samir's digger when it has been used for 10 000 hours. [5]

Question taken from Eduqas examination paper 530002, June 2022

#7

A new supermarket is about to open in a town with 8000 houses.
For the first four weeks, £10 vouchers will be sent out to encourage people to visit the supermarket.

At the start of the first week, 30% of the houses in the town will each be sent a voucher.
At the start of each of the next three weeks, a voucher will be sent to 30% of the houses that have **not yet received** a voucher.
The vouchers need to be used in the supermarket by the end of the four weeks.

(a) John, the supermarket manager, says

"By the end of the four weeks, 6079 of the vouchers will have been used."

Show that John could be correct. [4]

.....

.....

.....

.....

.....

.....

.....

.....

(b) (i) State an assumption that John has made in part (a). [1]

.....

.....

.....

(ii) If John's assumption was not correct, what effect would this have on the number of vouchers used by the end of the four weeks? [1]

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2024

#8

Heath has £3000 to invest for five years.
No extra money will be paid in or withdrawn during these five years.
He is going to choose one of these accounts.

Account A	**Account B**
4% compound interest per year Interest rates can vary	Guaranteed interest at the end of 5 years of £190 for each £1000 invested

(a) Which account gives Heath the greater **percentage increase** in his money at the end of 5 years and by how much is it greater?

Show how you decide. State any assumption that you make. [6]

Account ..... gives the greater percentage increase by ..... %

Assumption .....

(b) Comment on the effect that your assumption in part (a) has had on your decision. [1]

Question taken from Eduqas examination paper 530002, June 2023

Standard Form: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	3	
#4	4	
#5	4	
#6	5	
#7	6	
Total	26	

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#1

(b) Work out the value of $4^{10} \times 4^{-7}$. [2]

Question taken from Eduqas examination paper 530001, November 2020

#2

Hans thinks of a number.
When his number is multiplied by $2{\cdot}4 \times 10^5$, the answer is $9{\cdot}6 \times 10^8$.

What number did Hans think of?
Write your answer in standard form. [2]

Question taken from Eduqas examination paper 530001, November 2023

#3

The surface area of the Earth is $5{\cdot}101 \times 10^8$ km^2.
The Earth's oceans are 70·9% of this surface area.

Estimate the surface area of the Earth's oceans.
Give your answer in standard form. [3]



Question taken from Eduqas examination paper 530001, May 2023

#4

(b) (i) Work out the value of $(2 \times 10^4) \times (4 \times 10^3)$.
Give your answer in standard form. [2]

(ii) Light travels at 3×10^5 kilometres per second.
The circumference of the Earth at the equator is 40 000 km.

Show that, in theory, a beam of light could circle the Earth at the equator more than 7 times in 1 second. [2]

Question taken from Eduqas examination paper 530001, November 2018

#5

(a) Calculate the value of $\frac{1{\cdot}29\times10^{5}}{3\times10^{-7}}$.

Give your answer in standard form. [2]

(b) Calculate the value of $\left(7{\cdot}6\times10^{5}\right)+\left(3\times10^{4}\right)$.

Give your answer in standard form. [2]

Question taken from Eduqas examination paper 530001, May 2024

#6

(a) Work out $(6 \times 10^5) \div 20$.
Give your answer in standard form. [2]

(b) At midday, the volume of water flowing over a waterfall is 3×10^8 litres per minute.

At midday, what is the volume of water flowing over the waterfall in litres per hour?
Give your answer in standard form. [3]

Question taken from Eduqas examination paper 530001, November 2022

#7

(a) (i) Write $4{\cdot}8 \times 10^{-3}$ as an ordinary number. [1]

(ii) Work out the value of $(2{\cdot}5 \times 10^{20}) + (9 \times 10^{20})$.
Give your answer in standard form. [2]

(b) In 2018, the total volume of ice in the Greenland ice sheet was $2{\cdot}99 \times 10^{6}$ km^3.
The total surface area of the ice sheet was $1{\cdot}799 \times 10^{6}$ km^2.

Assuming that the depth of the ice was constant for the whole ice sheet, **estimate** the depth of the ice in 2018.
You must state the units of your answer. [3]

Depth of ice = ... Units .....

Question taken from Eduqas examination paper 530001, November 2019

Standard Form: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	3	
Total	6	

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#1

(b) Calculate $(1{\cdot}8 \times 10^6) \times (2{\cdot}5 \times 10^8)$ giving your answer in standard form. [1]

.....

.....

Question taken from Eduqas examination paper 530002, June 2019

#2

(c) Write 6 300 000 in standard form. [1]

.....

.....

Question taken from Eduqas examination paper 530002, June 2022

#3

1 micrometre = 1×10^{-4} centimetres.
Which of the answers below represents 2·4 micrometres in **metres**?
Circle your answer. [1]

$2{\cdot}4 \times 10^{-4}$ $2{\cdot}4 \times 10^{-6}$ $2{\cdot}4 \times 10^{2}$ $2{\cdot}4 \times 10^{-2}$ $2{\cdot}4 \times 10^{-5}$

.....

.....

.....

.....

Question taken from Eduqas examination paper 530002, November 2024

#4

(a) Which of the following are **not** written in standard form?

Circle your answers. [1]

$1{\cdot}2 \times 10^3$ $12{\cdot}5 \times 10^7$ 12000000 7 million $6{\cdot}087 \times 10^6$

(b) Calculate $5 \times (2{\cdot}6 \times 10^4)$, giving your answer in standard form. [2]

Question taken from Eduqas examination paper 530002, June 2018

Upper and Lower Bounds: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	4	
#2	5	
Total	9	

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#1

(a) Mary and Paul run 100 metres.

Mary's time is between 14 and 15 seconds inclusive.
Paul's time is between 12 and 13 seconds inclusive.

Complete the inequality to show the least and greatest possible difference between the times of these two runners. [2]

..... ⩽ time difference ⩽ .....

(b) Peter wants to go by ferry to France.
He is taking a van and a small trailer.
He knows:

- the van is 590 centimetres long, correct to the nearest 10 cm
- the trailer is 200 centimetres long, correct to the nearest 10 cm.

The ferry company uses the following rules for the length of vehicles.

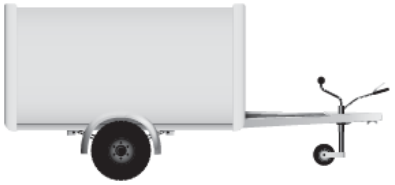




Diagram not drawn to scale

Small trailer: maximum length 2 m	Van: maximum length 6 m

Peter thinks that the length of his van and the length of his trailer will **both** fit the rules.

Use lengths to give one example to show how Peter **may** be correct, and one example to show how Peter **may not** be correct. [2]

May be correct .....

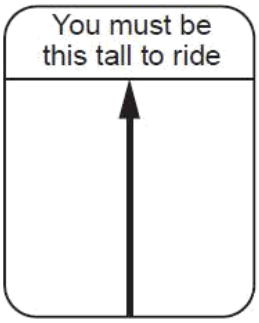
May not be correct .....

Question taken from Eduqas examination paper 530001, November 2022

#2

When Jenna was measured recently she was 127 cm tall, **correct to the nearest centimetre**.

For safety reasons, the minimum height for a person to ride the Big Coaster at a funfair in the USA is 50 inches.



You are given:
20 inches = 50·8 cm.

(a) Using the information given, decide whether it might possibly be safe, it is definitely safe, or it is definitely not safe for Jenna to ride the Big Coaster.

Might possibly be safe ☐ Definitely safe ☐ Definitely not safe ☐

Show how you decide. [3]

(b) (i) State an assumption that you have made in your answer to part *(a)*. [1]

(ii) Comment on the effect that your assumption has had on your decision. [1]

Question taken from Eduqas examination paper 530001, June 2019

Upper and Lower Bounds: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
Total	2	

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eduqas Part of WJEC Question Bank

#1

The length of a football pitch is 94 m, correct to the nearest metre.

Complete the inequality below with the least and greatest values for the length of the football pitch. [2]

..... ⩽ Length < .....

Question taken from Eduqas examination paper 530002, November 2018

Surds: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
Total	3	

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#1 Simplify $7\sqrt{2} \times 3$ [1]

.....

.....

Question taken from Eduqas examination paper 530001, November 2023

#2 *(a)* Simplify $14\sqrt{5} - 3\sqrt{5}$. [1]

.....

.....

.....

Question taken from Eduqas examination paper 530001, November 2020

#3 *(a)* Simplify $5\sqrt{7} + 3\sqrt{7}$. [1]

.....

.....

Question taken from Eduqas examination paper 530001, November 2021

Miscellaneous: Calculator

Question	Maximum Mark	Mark Awarded
#1	9	
Total	9	

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#1

The table shows the prices of 1st class and 2nd class stamps for some years between 2006 and 2016.

Year	1st Class	2nd Class
2006	32p	23p
2010	41p	32p
2011	46p	36p
2012	60p	50p
2015	63p	54p
2016	64p	55p

(a) In which year was the price of a 1st class stamp double the price of a 1st class stamp in 2006? [1]

.....

(b) Write the ratio of the price of a 1st class stamp to the price of a 2nd class stamp in 2015. Simplify the ratio as far as possible. [2]

.....

.....

Ratio is ..... : .....

(c) In 2010, an accountant sent 2500 letters using 1st class stamps.
In 2015, the accountant sent 2150 letters using 2nd class stamps.

In which year did the accountant spend more money on stamps, and by how much?
Give your answer in pounds (£). [4]

.....

.....

.....

(d) Jenny looked at the table of prices of stamps and said,

"In 2012, the price of a 1st class stamp is 20% more than the price of a 2nd class stamp".

Show that Jenny is correct. [2]

.....

.....

.....

Question taken from Eduqas examination paper 530002, June 2018

Numbers in Words / Figures: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	1	
Total	5	

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Marking Scheme

#1

	Mark	Comment
(a) Twenty thousand (and) fifty-six	B1	

#2

Component 2: Foundation Tier	Mark	Comment
(a) Three hundred and forty thousand, two hundred and five	B1	Do not penalise incorrect spelling.

#3

Component 2: Foundation Tier	Mark	Comment
(a) 6 520 000	B1	

#4

Component 2: Foundation Tier	Mark	Comment
(a) 500 000	B1	

#5

Eduqas Autumn 2019 C2 Foundation Tier		Comments
(b) Eight million, one hundred thousand (and) forty three	B1	CAO

Place Value: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	2	
#5	2	
Total	7	

created with
eduqas Part of WJEC Question Bank

Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 0·2 OR $\frac{2}{10}$ oe	B1	Accept two tenth(s). Allow tenth(s) but not 0·1.

#2

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) 41554	B1	

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(d) 13·2	B1	

#4

Component 1: Foundation Tier	Mark	Comment
(b) 156·5	B2	B1 for 15.65 or 1565.

#5

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b)(i) 2652	B1	
(b)(ii) 0·78	B1	

Place Value: Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
Total	6	

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eduqas Part of WJEC Question Bank

Marking Scheme

#1

Component 2: Foundation Tier	Mark	Comment
(c) 2/10 circled	B1	
(e)(i) 7543	B1	
(e)(ii) 3574	B1	

#2

	Mark	Comment
(c)(i) X Y 6 4 Z where X,Y and Z are non-repeating digits from the list.	B1	
(c) (ii) (6) Thousand(s)	B1	Allow 6000
(d) $\frac{3}{100}$ identified.	B1	

Ordering Values: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	1	
#6	1	
#7	1	
#8	2	
#9	3	
Total	12	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(f) –7·5 –7 3·2 5	B1	

#2

Component 1: Foundation Tier	Mark	Comment
(c) 0·3, 0·302, 0·35, 0·8, 3	B1	

#3

	Mark	Comment
(c) 4.601 indicated	B1	

#4

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(d) $\frac{3}{10}, \frac{3}{7}, \frac{3}{5}$	B1	

#5

Component 1: Foundation Tier	Mark	Comment
(c) 5	B1	

#6

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(d) 0.03, 0, –2, –5	B1	

#7

Component 1: Foundation Tier	Mark	Comment
(f) Any value less than –10	B1	

#8

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(c) 0.35	B2	Allow equivalent correct values e.g. 35%; If 0.35 indicated as answer, ignore working B1 for $\frac{3}{20} = 0.15$ or for $\frac{1}{4} = 0.25$ or for $\frac{3}{10} = 0.3$ or for a comparative statement such as '$\frac{3}{20}$ is less than $\frac{3}{10}$' or for two correct percentages from 15%, 35%, -30%, 25%, 3.1% and 30% or for two correct fractions with a common denominator

#9

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(i) Wednesday	B1	Accept any clear indication; B0 for –6 only
(a)(ii) 6.5	B1	Allow –6.5
(a)(iii) –5	B1	

Ordering Values: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	2	
#6	2	
#7	2	
#8	2	
Total	12	

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Marking Scheme

#1

Component 2: Foundation Tier	Mark	
(a) Correct inequality unambiguously indicated $\frac{1}{7} \leq \frac{1}{8}$ $\frac{1}{7} \geq \frac{1}{8}$ $\frac{1}{7} = \frac{1}{8}$ $\frac{1}{7} > \frac{1}{8}$ $\frac{1}{7} < \frac{1}{8}$	B1	

#2

Component 2: Foundation Tier	Mark	Comment
(d) -5 -3 3.45 3.6 6	B1	

#3

Component 2: Foundation Tier	**Mark**	**Comment**
(a) 0·24 < 0·3 oe	B1	Allow for the unambiguous sight of < unless used incorrectly.

#4

Component 2: Foundation Tier	**Mark**	**Comment**
(a) 8.25 oe	B1	Accept 8 ¼ and $\frac{33}{4}$

#5

	Mark	**Comment**
(a) 35(p), 58(p), (£.0.)95, (£)3.45, (£)7.25 Or equivalent.	B2	B1 if only one value incorrectly placed or omitted or sight of all values in the same units but incorrect order. B1 for listing items in the correct order.

#6

Eduqas Autumn 2018 **Component 2: Foundation Tier**	**Mark**	**Comment**
(a) Converting to a suitable form for comparison, e.g. $^{5}/_{9}$ = 0.555, $^{139}/_{250}$ = 0.556 and 56% = 0.560 or 55.5….% or 55.6% and 56%	M1	Allow for at least 2 numbers in a comparable format. *Alternative method using fractions: 1251/2250, 1250/2250 M1*
= $^{5}/_{9}$, $^{139}/_{250}$, 56% (or equivalent)	A1	Provided no incorrect working seen

#7

Component 2: Foundation Tier	Mark	Comment
(c) All symbols correctly placed. 6 < 15 0·34 < 0·7 -8 > -11	B2	B1 for two symbols correctly placed.

#8

Component 2: Foundation Tier	Mark	
(a) 60(p), 86(p), (£)1.85, (£)4.23 oe	B2	Allow costs given in pounds or pence. B1 for one of the following: • One of the costs chosen incorrectly from the table but placed correctly. • Listing the correct items in the correct order e.g. fruit, cereal bar, coffee, salad. • The correct values in the correct order but with incorrect units e.g. 0.60p. • Three of the values placed in the correct order with one omission. • The four costs ordered from biggest to smallest correctly. Note: Allow £0.86p

Rounding: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	2	
Total	3	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) 33 000	B1	

#2

Component 1: Foundation Tier	Mark	Comment
(c) 23, 24, (25), 26, 27	B2	B1 for 3 values out of 23, 24, 26, 27. Penalise –1 for each further value.

Rounding: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	2	
#4	3	
Total	7	

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Marking Scheme

#1

Component 2: Foundation Tier	Mark	Comment
(b) 68 000	B1	

#2

Component 2: Foundation Tier	Mark	
(b) 0·06	B1	Do not allow trailing zeros e.g. 0·06000

#3

Component 2: Foundation Tier	Mark	Comment
(d)(i) 465 780	B1	
(d)(ii) 466 000	B1	

#4

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a)(i) 2 x10.50 + 2 x 9.99 + 3 x 4.50 + 1 x 3.75 (21 +19.98+13.50 + 3.75) = (£)58.23	M1 A1	
(ii) (£)60	B1	FT 'their £58.23' provided at least M1 awarded earlier, and equivalent difficulty.

Estimation: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	3	
#4	3	
#5	4	
#6	4	
Total	18	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) No and valid supporting evidence e.g. '$(40 - 30)^2$ is about 100' or '$41 - 29.5 = 11.5 \approx 12$ so it is about 144' or '11^2 is 121'	E2	Allow e.g. 'No and the answer is about 100' for 2 marks E1 for No and partial evidence which includes both the difference and squaring e.g. sight of $(40 - 30)^2$ or '$41 - 29.5 = 11.5$ and 11.5^2 is a lot less than 700.' NB if 'yes' is indicated then E0

#2

GCSE (9-1) Mathematics **Component 1: Foundation Tier**	**Mark**	**Comment**
(a) $\frac{2 \times 100}{40}$ or $\frac{2 \times 99}{40}$ or $\frac{2.1 \times 100}{40}$ 5 or 4·95 or 5·25	M1 A1	May be seen in stages. Award M1 only for $\frac{2.13 \times 100}{40}$ Must follow their calculation. Award M0 A0 for an unsupported 5.

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) $(170 - 20 \times 7) \div 3$ or $20 \times 7 + 10 \times 3$ (= 170) or $20 \times 7 + 10 \times 2.89 = 168.90$ or $20 \times 7 + 11 \times 2.89 = 171.79$ or $20 \times 6.99 + 10 \times 2.89 = 168.70$ or $20 \times 6.99 + 11 \times 2.89 = 171.59$ or $170 - 20 \times 7 = 30$ **and** $10 \times 3 = 30$ oe or $170 - 20 \times 6.99 = 30.2$ **and** $10 \times 2.89 = 28.90$ oe or $170 - 20 \times 6.99 = 30.2$ **and** $11 \times 2.89 = 31.79$ oe	M2	M1 for $170 - 20 \times 7$ oe; implied by 30; may be embedded in e.g. $(170 - 20 \times 7) \div 2.89$ or $(170 - 20 \times 6.99) \div 3$ or for attempting to find multiples of 3 or 2.89 to make approximately 170 using e.g. $20 \times 7 + \ldots\ldots \times 3$ (= 170) or $20 \times 6.99 + \ldots\ldots \times 3$ (= 170) or $20 \times 7 + \ldots\ldots \times 2.89$ (= 170) or $20 \times 6.99 + \ldots \times 2.89$ (=170) or $170 - 20 \times 7$ **and** $\ldots\ldots \times 3$ or $170 - 20 \times 6.99$ **and** $\ldots\ldots \times 2.89$
10 or 11	A1	implies M2 if not from clearly wrong working but may not have working If no marks allow SC1 for $(170 - 20 \times 6.99) \div 2.89$ seen; may be in stages

#4

Component 1: Foundation Tier	Mark	Comment
(b) Uses only the cost of 1 Mega Burger, 1 Chicken Burger 1 Fish Pie, 1 Vegetarian Lasagne	B1	e.g. does not include the £7(.25) and £6(.30) in their calculation for the bill
Uses an appropriate calculation e.g. 9 + 9 + 10 + 7 or 48 – 7 – 6 or 50 – 8 – 7	M1	FT 'their 4 list choices'; allow one incorrect estimate out of 4 or 6 e.g. 9 + 9 + 9 + 7 or 9 + 7.20 + 9 + 6.30 + 9.90 + 6.80 allow e.g. 9 + 7 + 9 + 6 + 10 + 7 OR rounding to the nearest 10p e.g. 9 + 9 + 9.9 + 6.8 or 9 + 7.30 + 9 + 6.30 + 9.90 + 6.80 OR rounding to the nearest 50p e.g. 9 + 7.50 + 9 + 6.50 + 10 + 7
(£)35(.00)	A1	CAO; does not imply M1; not from wrong working if B0 M1 award SC1 for (£)35(.00) (from e.g. 9 + 7 + 9 + 6 + 10 + 7) or for (£)49(.00) (from 9 + 7.50 + 9 + 6.50 + 10 + 7)

#5

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
2 × 2000 or 1990 + 1800 or 2000 + 1800 or 2000 + 1900 or equivalent	B1	Allow any reasonable calculation with at least one correctly rounded value and no incorrect rounding in each case. NB1 the question requires a calculation so sight of 2000 and 1800 followed by a total of 3800 without the + seen is B0 NB2 It is acceptable to round up in both cases because of the context of the question. Ignore consistent place value errors from converting to kg for M1 A1
Attempts to calculate e.g. 2 × 2000 + 3000 (= 7000) or 1990 + 1800 + 3000 (= 6790) or 2000 + 1800 + 3000 (=6800) 2000 + 1900 + 3000 (= 6900) or 1986 + 1834 + 3000 (= 6820) or equivalent or 7000 – 2 × 2000 (= 3000) or 7000 – 1990 – 1800 (= 3210) or 7000 – 2000 – 1800 (= 3200) 7000 – 2000 – 1900 (= 3100) 7000 – 1986 – 1834 (= 3180)	M1	'their estimate for the total mass' + 3000 or 'the actual total mass + 3000'; or 7000 – 'their estimate for the total mass' or 7000 – 'the actual total mass' Accept all masses in kilograms Allow 7000 – 3000 (= 4000) with sight of the total mass of the rabbits
Evaluates correctly	A1	FT their sum or difference of masses; implies M1
Yes stated or implied following a correctly-evaluated, valid calculation and with evidence of an appropriate correct conversion from grams to kilograms or kilograms to grams seen or implied at some stage e.g. 1986 (g) ≈ 2 (kg) or 1834 (g) ≈ 1.8 (kg) 7000 (g) = 7(kg) or 6790(g) = 6.79(0) (kg) or 6900 (g) = 6.9(00) (kg)	A1	Dep on previous M1 A1 Conversion may be implied by e.g. 6800 g is less than 7 kg or by 4000 + 3000 = 7000 g so yes but NOT by e.g. 6800 is less than 7 or 4000 + 3000 = 7000 Allow further rounding when grams converted to kg e.g. 6900 (grams) = 7 kg NB Sight of 1000 g = 1 kg only, is not sufficient to earn the mark. The conversion must be for a mass relating to the context of the question.
	(4)	

#6

GCSE (9-1) Mathematics Component 1: Foundation Tier		Mark	Comment
(c)(i)	Use of 12 or 10 bags	M1	
	Suitable calculation e.g. (£)7[.00] × 12 or (£)7.2[0] × 12 or (£)7[.00] × 10 or (£)7.2[0] × 10 or (£)7.19× 10	M1	or equivalent; allow (£)7.5[0] ×12 or (£)7.5[0] ×10 or a less accurate rounding e.g. (£)10 ×12 or (£)10 ×10
	Correct evaluation e.g. (£)84[.00] or (£)86.4[0] or (£)70[.00] or (£)72[.00] or (£)71.9[0]	A1	Method must be shown; allow (£)90[.00] or (£)75.00 If first M0, allow M1 for (£)7[.00] × 18 or (£)7[.00] × 20 or (£)7.2[0] × 18 or (£)7.2[0] × 20 or (£)7.19 × 20 or (£)7.5[0] × 18 or (£)7.5[0] × 20 or equivalent or for a less accurate rounding e.g. 10 × 20 and A1 for correct evaluation e.g. (£)126[.00] or (£)140[.00] or (£)129.6[0] or (£)144[.00] or (£)143.80 or (£)135[.00] or (£)150[.00] If M1 M0, allow SC1 for [12 × 7.19 =] £86.28 rounded to £86[.00] or £90[.00]
(c)(ii)	Appropriate answer e.g. 'Under-estimate as I rounded down.'	E1	Dependent on their calculation for (c)(i); cannot be awarded if (c)(i) is not attempted. NB compare with £86.28

Number Facts: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	2	
#5	2	
#6	3	
#7	3	
#8	4	
#9	4	
Total	21	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(c) 2	B1	

#2

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) $5 - 3 \neq 8$	B1	CAO

#3

Component 1: Foundation Tier	Mark	Comment
(b) No, AND correct reason stated e.g. • 'two odd numbers add to give an even number (and 21 is odd)' • 'you can only add an odd number and an even number (to get 21)' • 'even + odd = odd (and 21 is odd)'	E1	If a box is not ticked, 'No' may be implied by their reason. Accept equivalent reasons e.g. One number would always have to be even. Do not allow 'no two odd numbers add to give 21' unless accompanied with at least two examples of two odd numbers adding to make an even number. E0 if candidates simply list pairs of numbers which add to 21 unless they are identified as odd or even. E0 if incorrect box is ticked, even if the correct reason is given.

#4

Component 1: Foundation Tier	Mark	Comment
(a) No, with a suitable reason e.g. • 'he needs 12 packs of water' • 'he has rounded down, not up' • 'he will only have 88 bottles' • 'he needs one extra (pack)' • 'he needs two extra bottles'	E1	Do not allow simply 'he won't have enough bottles'.
(b) Any suitable explanation e.g. • 'he should divide by 5, then multiply by 4' • 'he is working out 1/4 (not sharing in the ratio 4:1)'	E1	Do not accept simply 'he should divide by 5'. Allow E1 for candidates who show the correct calculation.
	(2)	

#5

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(i) 16	B1	
(a)(ii) 2	B1	

#6

Component 1: Foundation Tier	Mark	Comment
(c)(i) 13	B1	
(c)(ii) 24	B1	
(c)(iii) 49	B1	

#7

Component 1: Foundation Tier	**Mark**	**Comment**
(a) (The number is) 16 (The factors of this number are) 1, 2, 4, 8, 16	B1 B1	Answer lines take precedence. Must be a list, not products. If no marks award SC1 for correctly listing all of the factors of two non-prime numbers between 13 and 19: • 14 - 1, 2, 7, 14 • 15 - 1, 3, 5, 15 • 18 - 1, 2, 3, 6, 9, 18
(b) 14, 28, 42	B1	May be in any order.

#8

GCSE (9-1) Mathematics Component 1: Foundation Tier	**Mark**	**Comment**
(b)(i) –3 and 4	B2	In either order B1 for two numbers with opposite signs whose product is –12 or whose sum is 1
(b)(ii) Correct solution e.g. 5 and –2 and –3 or 6 and –5 and –1	B2	In any order B1 for three numbers with two negative whose product is 30 or whose sum is 0 or for –5 and 2 and 3 or –6 and 5 and 1, three numbers whose product is –30 and whose sum is 0.

#9

Component 1: Foundation Tier	Mark	Comment
(a) 2 and –18 OR –2 and 18	B2	B1 for two integers, one positive and one negative, that satisfy one of the criteria
(b) 2 and –3 and –4	B2	B1 for three integers, two of which are negative, that satisfy one of the criteria e.g. –2 and –3 and 0 –4 and –1 and 0
	(4)	

Number Facts: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	2	
#4	3	
#5	3	
#6	3	
#7	4	
#8	4	
#9	4	
#10	7	
Total	32	

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Marking Scheme

#1

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a) Valid explanation, e.g. '28.8 means £28.80', '80p not 8p'	E1	Sight of 28.80 is sufficient.

#2

Component 2: Foundation Tier	Mark	Comment
(c) 24 ÷ 6 + 4 or 4 + 24 ÷ 6	B1	

#3

	Mark	Comment
An answer of 225	B2 (2)	B1 for 256 or 289

#4

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a) 30, 45 and 60	B2	B1 for all 3 correct and 1 extra incorrect, Or B1 for 2 correct and 1 missing.
(b) A correct demonstration that 37 is a factor of 888. e.g. '888÷37 = 24, so 37 is a factor' '2^3 x 3 x 37' ,'888÷8=111, 111÷3=37'	B1 (3)	

#5

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
8 and 10 in the correct order	B3	As final answer or last trial Allow B2 for an answer of 10 and 8 B1 for sight of any one of the pairs: 9 and 11, 8 and 10, 7 and 9, 6 and 8, 5 and 7 AND B1 for sight of any one of the pairs: 10 and 11, 6 and 9, 4 and 8, 2 and 7
Alternative method $a = b - 2$ *AND* $b - 6 = \frac{a}{2}$ *or* $2(b - 6) = a$ *oe*	*B1*	
Eliminates one variable e.g. $b - 2 = 2(b - 6)$ *or* $a + 2 = \frac{a}{2} + 12$ *oe*	*M1*	
$a = 8$ *AND* $b = 10$	*A1*	*Final answer or in the correct order on the answer line.*
	(3)	

#6

Component 2: Foundation Tier	Mark	
(c) 2, 6, 9 in any order	B3	B2 for listing all six factors only (allow 18 to be omitted and repeats). B1 for one of the following: • Listing at least 3 correct factors with no incorrect values. • Listing 4 or 5 correct factors with no more than 1 incorrect value. • Three different numbers in the answer boxes with a sum of 17.

#7

GCSE (9-1) Mathematics Component 2: Foundation Tier	**Mark**	**Comment**
(a) 108	B1	
(b) 29	B1	
(c) 18	B1	
(d) 343	B1	
	(4)	

#8

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
(a) 13 and 17 30	B1 B1	FT 'their 13' + 'their 17' provided that one of the numbers is prime.
(b) 75 and 25 1875	B1 B1 (4)	FT 'their 75 x their 25' correctly evaluated. Numbers from the list.

#9

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
(a) 91	B1	
(b) 20	B1	
(c) 31	B1	
(d) 169	B1	
	(4)	

#10

Component 2: Foundation Tier	Mark	Comment
(a)(i) (13 + 17 =) 30	B2	Award B1 for either of: • Identifying 13 AND 17 and no others • A correct evaluation of (13 + x) or (17 + y) where x and y are numbers from the cards.
(a)(ii) (9 × 36 =) 324	B2	Award B1 for either of: • Identifying 9 AND 36 and no others • A correct evaluation of (9 × a) or (36 × b) where a and b are numbers from the cards
(a)(iii) 24	B2	B1 for an answer of 9, 32 or 36 (a number satisfying one of the conditions) Allow B1 for 24 with one extra providing it is 9, 32 or 36
(b) Unambiguously stating or implying 'No' with a reason, e.g. 'the chance is 1/9', 'one cube number not two', '27 is the only cube number so 1/9 chance'	E1	Allow 'No' and '27 is the only cube number' 'only one cube number' 'there are not two cube numbers' Do not allow '3 x 3 x 3 = 27' '27 = cube number'
	(7)	

Listing All Possible Outcomes: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
Total	4	

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
Correctly completed table e.g. : A 1 A 2 A 3 A 4 B 1 B 2 B 3 B 4 C 1 C 2 C 3 C 4	B2	Allow the first two rows to be repeated for B2. B1 for at least 6 additional correct rows, ignoring any repeated rows.
	(2)	

#2

Component 1: Foundation Tier	**Mark**	**Comment**
(a) Girl / Boy P T P W R T R W S T S W Z T Z W	B2	Rows could be in any order; letters could be lower case B1 for any 4 or 5 of the remaining 6 rows with no incorrect rows; OR for all 6 remaining rows with extra rows; For B2 they must only have the correct 6 expected rows **except** B2 can also be awarded if all 6 correct expected rows are given and the 2 given rows are repeated **AND** 8 outcomes indicated in (b) e.g. by a fraction with denominator 8.

Listing All Possible Outcomes: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
Total	8	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(a) CC CV CS SS SV VV oe	B2	B1 for 4 or 5 correct Ignore inclusion of VC, SC and VS oe

#2

Component 2: Foundation Tier	Mark	Comment
(a)(i) Coin 1 / Coin 2 / Coin 3 **H H H** H H T H T H T H H H T T T H T T T H T T T	B2	For a fully correct table. Allow HHH to be repeated but no others. B1 for at least five different outcomes.
(a)(ii) $\frac{1}{8}$ oe	B1	FT $\frac{1}{\text{'their total number of outcomes'}}$, provided B1 previously awarded. *Note: 3/24 is awarded B0 (from counting H and T's in the table)*

#3

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
(a) Letter / Number / Shape A 1 △ A 2 △ A 3 △ A 1 ○ A 2 ○ A 3 ○ B 1 △ B 2 △ B 3 △ B 1 ○ B 2 ○ B 3 ○	B2	B2 for a complete table with no errors or repeats, except the first row. B1 for 6 or more correct rows, ignoring any repeated rows. Note: order of rows may be different. Allow the use of words or letters for triangle and circle.
(b) $\frac{1}{12}$ or 0.083̇ or 8.3̇% oe ISW	B1	Allow 0.0833(...) or 8.33(...)% FT their table provided B1 awarded in (a). B0 for '1 out of 12' oe or 1:12 only.
	(3)	

Calculating with the Four Operations: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	2	
#3	2	
#4	2	
#5	2	
#6	2	
#7	2	
#8	2	
#9	3	
#10	3	
#11	3	
#12	3	
#13	3	
#14	4	
#15	4	
#16	4	

#17	4
#18	4
#19	4
#20	4
#21	4
#22	4
#23	4
#24	4
#25	4
#26	4
#27	5
#28	5
#29	5
#30	5
#31	5
#32	5
#33	8
Total	120

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(d) 21	B1	

#2

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) $16 \times 5 + 12.50$ or equivalent	M1	
(£)92.50	A1	If no marks, SC1 for an answer of 204.50 (including the 112)

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(i) 600	B1	
(a)(ii) 24	B1	Not for $24 \times 4 = 96$ without indication that 24 is the answer but allow for $4\overline{)96}$

#4

	Mark	Comment
(a)(i) 50	B1	
(a)(ii) 4.5 oe	B1	not for 4 rem 5

#5

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 7	B1	
(e) 109.8	B1	Allow trailing zeros

#6

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(i) 51	B1	
(a)(ii) 705[.00]	B1	

#7

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(i) $3 \times (4 + 1) \times 2 = 30$	B1	
(a)(ii) $(50 - 36) \div 2 \times 3 = 21$	B1	

#8

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
No indicated or unambiguously implied, with convincing reason e.g. • she can buy 25 not 24. • 25 is not double 12.	B2	B1 for any one of the following: • 12 (candles) cost £36 • she can buy 12 candles (for £38). • 24 (candles) cost £36 • 25 (candles) cost £37.50 • she can buy 25 candles (for £38).
	(2)	

#9

Component 1: Foundation Tier	Mark	Comment
(a)(i) 800	B1	
(a)(ii) 19	B1	
(a)(v) 13·83	B1	

#10

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) Valid explanation e.g. '$\frac{3}{21}$ is the same as $\frac{1}{7}$ (not 3 times it).'	E1	Accept e.g. '$3\times\frac{1}{7}=\frac{3}{7}$ (not $\frac{3}{21}$)' or '$\frac{3}{21}=\frac{1}{7}$ (not $\frac{3}{7}$)'
(c) $\frac{9}{12}+\frac{2}{12}$	M1	or equivalent calculation with correct common denominator
$\frac{11}{12}$ or equivalent	A1	

#11

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) (752 – 27 =) 725 725 ÷ 25 29	 B1 M1 A1	 FT 'their 752 – 27'
Alternative method 1: *752 ÷ 25 si* *30 remainder 2 or 30.08* *29*	 *M1* *A1* *A1*	
Alternative method 2: *At least two trials of 25 × n or 752 ÷ n, where n is greater than 20* *25 × 29 = 725* *29*	 *M1* *A1* *A1*	 *implies M1*

#12

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
$\frac{5}{7}-\ldots=\frac{2}{21}$ si or for sight of $\frac{15}{21}$ or for $\frac{5}{7}-\frac{2}{21}$ or for $\frac{2}{21}-\frac{5}{7}$	B1	Allow for sight of e.g. $\left(\frac{15}{21}=\right)\frac{105}{147}$ and $\left(\frac{2}{21}=\right)\frac{14}{147}$
$\frac{13}{21}$ oe, ISW	B2	B1 for $\frac{15}{21}-\frac{2}{21}$ oe; this also implies the first B1
	(3)	

#13

Component 1: Foundation Tier	Mark	Comment
(a) $1-\left(\frac{6}{14}+\frac{5}{14}\right)$ oe, si	M2	M1 for $\frac{6}{14}+\frac{5}{14}$ oe, si
$\frac{3}{14}$ or equivalent fraction	A1	If M1 A0, award SC1 for a final answer of $\frac{11}{14}$ or equivalent fraction

#14

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
$7+\frac{5}{20}+\frac{9}{20}$ or $\frac{105}{20}+\frac{49}{20}$ oe; si **and** $3+\frac{5}{20}-\frac{9}{20}$ or $\frac{105}{20}-\frac{49}{20}$ oe; si	M2	equivalents may be decimals 5.25 + 2.45 and 5.25 – 2.45 M1 for $5\frac{5}{20}+2\frac{9}{20}$ oe or $5\frac{5}{20}-2\frac{9}{20}$ oe or 5.25 + 2.45 or 5.25 – 2.45
$7\frac{7}{10}$ and $2\frac{4}{5}$	A2	CAO A1 for either or for a pair of correct, but unsimplified, answers
	(4)	

#15

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(i) 600	B1	
(a)(ii) 70	B1	
(a)(iii) 0.926	B2	B1 for attempt to subtract correct place values si; B1 implied by a decimal answer ending in 26 NB 1.061 is B0

#16

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b)(i) 619, 3600, 4658, 12212	B1	Allow place names/abbreviations in the correct order (Pinestow, Elmvale, Copley, Tanham); If figs and place names stated, answer line takes precedence
(b)(ii) $(4700-3600)\div 4$ 275	M2 A1	M1 for sight of 4700 – 3600 If no marks, award SC2 for sight of (4700 – 619) ÷ 4 and answer 1021 or (4700 – 4658) ÷ 4 and answer 11 or SC1 for sight of (4700 – 619) ÷ 4 or (4700 – 4658) ÷ 4

#17

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) (Money left =) 180 – 40 – (2 × 15 + 3 × 10 + 2 × 12 + 3 × 7) (180 – 40 – (30 + 30 + 24 + 21)) OR 180 – 40 – (2 × (15 + 12) + 3 × (10 + 7)) (180 – 40 – 54 – 51) (180 – 145) (£)35	M3 A1	May be seen in stages. Award M2 and a possible A1 for a calculation that would be awarded M3 except for: • an error in, or omission of, one of the calculations 2 × 15, 3 × 10, 2 × 12, 3 × 7 • OR the omission of the 40 M2 (A0) for one of the following • (40 +) 2 × 15 + 3 × 10 + 2 × 12 + 3 × 7 • (40 +) + 30 + 30 + 24 + 21 (= 40 + 105) • (40 +) 2 × (15 + 12) + 3 × (10 + 7) • (40 +) + 54 + 51 (= 40 + 105) • Appropriate sight of 105 or 145 M1 for any one of the following (which may be embedded in a further (possibly incorrect) calculation): • (Tickets) 2 × 15 + 3 × 10 (= 30 + 30 = £60) • (Lunch) 2 × 12 + 3 × 7 (= 24 + 21 = £45) • (Adults) 2 × (15 + 12) (= 2 × 27 = £54) • (Children) 3 × (10 + 7) (= 3 × 17 = £51) • 180 – one of 30, 24 or 21 FT only from M2 as identified above

#18

Component 1: Foundation Tier	Mark	Comment
(a)(i) 700	B1	
(a)(ii) 65 000	B1	
(a)(iii) –5	B1	
(b) 79	B1	

#19

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b)(i) 505	B1	
(b)(ii) 4.5	B1	Allow trailing zeros e.g. 4.50
(e) 20	B2	B1 for $\frac{40}{2}$ or $\frac{240}{12}$ oe, si

#20

Component 1: Foundation Tier	Mark	Comment
(a) 57	B1	
(b) 13.732	B2	B1 for attempting to **add** the correct place values in the correct order; allow one slip, but the thousandths digit must be a 2.
(c) 11	B1	

#21

Component 1: Foundation Tier	**Mark**	**Comment**
(a)(i) 1200	B1	
(a)(ii) 0.6(00)	B1	Ignore trailing zeros; Accept $\frac{6}{10}$ oe
(a)(iii) 22	B1	
(a)(iv) 13	B1	

#22

Component 1: Foundation Tier	Mark	Comment
(a)(i) Valid explanation e.g. 'He worked out 2 × (£)3.20' oe	E1	Accept e.g. 'He doubled the cost of 2 chicken pieces' Do not accept e.g. '2 × 2' only
(a)(ii) Valid explanation e.g. '(If charged for) one chicken piece and three chicken pieces (it would cost £6.20)'	E1	Accept 4.20 + 2(.00) = 6.20 oe Do not allow '(£)6.20' only.
(b) 600 (trays)	B2	B1 for any one of the following: • 2 × (£)33 + (£)17 • 250 (trays) × 2 + 100 (trays) • finding a number of trays that cost £83 (not 600) e.g. 4 x 100 (trays) + 3 x 25 (trays) = 475 (trays)
	(4)	

#23

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(Cost of one block of butter =) $\frac{10 - 0.6(0) - 3 \times 1.5(0) - 1.4(0)}{2}$	M3	Accept equivalent work in pence. May be seen in stages. M2 for one of the following: • $(10 - 3 \times 1.5(0) - 1.4(0)) \div 2$ (=(£)2.05) (60p omitted) • $10 - 0.6(0) - 3 \times 1.5(0) - 1.4(0)$ (=(£)3.50) (÷ 2 omitted) • $(10 - 0.6(0) - 1.5(0) - 1.4(0)) \div 2$ (=(£)3.25) (3 omitted) • $(10 - 0.6(0) - 3 \times 1.5(0)) \div 2$ (=(£)2.45) (1.40 omitted) M1 for two of the errors allowed above or for $(10 - 0.6(0) - 3 \times 1.5(0) - 1.4(0)) \div 2$ with mixed units (unless corrected later).
(£)1.75 or 175p.	A1	FT from M2 only. If units are given, they must correct. If no marks, award SC1 for sight of (cost of milk and bread = 3 × 1.50 + 1.40 = £)5.90
	(4)	

#24

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
$\left(\frac{1}{3}+\frac{2}{5}=\right)\ \frac{5}{15}+\frac{6}{15}$ or $\frac{5+6}{15}$ si	M1	
$\frac{11}{15}$ oe	A1	
$\frac{33}{11}\times 15$ si or $\frac{11}{15}=\frac{33}{45}$ or $\frac{11}{15}+\frac{4}{15}=33+12$	M1	FT 'their $\frac{11}{15}$' if possible;
45	A1	CAO;
	(4)	

#25

Component 1: Foundation Tier	Mark	Comment
(a) $\frac{9}{14}-\frac{2\times 2}{7\times 2}$ oe	M1	Correct use of a common denominator e.g. $\frac{9\times 7}{14\times 7}-\frac{2\times 14}{14\times 7}$ (= $\frac{35}{98}$ ISW)
$\frac{5}{14}$ oe	A1	ISW
(b) $\frac{2}{13}$	B2	B1 for sight of $\frac{10}{65}$ or $\frac{2}{13}\times 1$
	(4)	

#26

Component 1: Foundation Tier	Mark	Comment
(a) 175	B2	B1 for sight of either: • 7×25 • 35×5
(b)(i) $4 \times (3 - 1) + 6 = 14$	B1	
(b)(ii) $\sqrt{36} \div (2 + 1) = 2$	B1	
	(4)	

#27

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) (£) $6.50 + 4.29 + (2.10 \div 2)$ or (£) 6.50 + 4.29 + 2.10 – 1.05 or equivalent	M2	M1 for $2.10 \div 2$ or equivalent or for sight of 1.05 or equivalent or for 6.50 + 4.29 + 2.10 or for sight of 12.89
(£)11.84 or 1184(p) CAO	A1	Allow £11.84p Do not allow 11.84p or £1184
(b) (£) 20 – (11.84 + 2.75) or equivalent	M1	FT 'their 11.84', provided it is less than 17.25
(£) 5.41 or 541(p)	A1	FT Allow £5.41p Do not allow 5.41p or £541
	(5)	

#28

	Mark	Comment
(a) $\frac{27}{63} + \frac{49}{63}$ oe	M1	May have different common denominator for all marks
$\frac{76}{63}$ oe	A1	
$1\frac{13}{63}$	B1	FT 'their $\frac{76}{63}$' provided an improper fraction
(b) $\frac{2}{7}$ oe	B2	B1 for $\frac{6}{7} \times \frac{1}{3}$ oe seen
	(5)	

#29

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 40	B1	
(b)(i) $\frac{1\times5}{4\times5}+\frac{3\times4}{5\times4}$ $=\frac{17}{20}$ OR 0·85	M1 A1	Or equivalent full method. CAO. Mark final answer.
(b)(ii) $\frac{5\times3}{6\times10}\left(=\frac{15}{60}\right)$ $=\frac{1}{4}$ OR 0·25	M1 A1	Or equivalent full method. CAO. Mark final answer.
	(5)	

#30

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 147	B1	
(b) 96	B1	
(c) 2·5 or 2 ½ or $\frac{5}{2}$	B2	B1 for sight of one of the following: • $\frac{15}{6}$ • 0·5 × 5 • 5 ÷ 2 • 15 ÷ 6
(d) 17	B1	
	(5)	

#31

Component 1: Foundation Tier	Mark	Comment
(a)(i) 10·74	B2	B1 for either: • an attempt to subtract correct place values in 12·10 – 1·36 e.g. an answer with 4 in the 2nd decimal place • a correct method with at most one error in their subtraction. B0 for errors in place value.
(a)(ii) 0·24	B1	
(a)(iii) $\frac{5}{12}$ oe	B2	B1 for one of the following: • sight of 2/12 • conversion of both fractions to a common denominator, allowing one slip in the numerator • 3·5/6 – 1/6 = 2·5/6 (full calculation)

#32

Component 1: Foundation Tier	**Mark**	**Comment**
(a) 9 × 6.5 oe, si	M1	May be in stages; may be a build-up method but must clearly be for 9 × 6.5 not e.g. 9 × 6
(£)58.5(0)	A1	CAO
(b) $\frac{314-160}{14}$ oe, si	M2	May be in stages; may use a build-up approach to find how many 14's are in 154 M1 for sight of 314 – 160 (= 154)
(£) 11(.00 per hour)	A1	CAO
	(5)	

#33

	Mark	Comment
(a)(i) 1 + 3 = 4 si or 16.8(0) ÷ 8 (= 2.1(0))	M1	
16.8(0) ÷ 4 oe or 'their 2.1(0)' × 2	M1	NB 16.8(0) ÷ 4 or 16.8(0) ÷ 8 × 2 earns M1M1
(£) 4.2(0)	A1	CAO
(a)(ii) Yes indicated with valid reason/calculation e.g. '34.20 + 16.80 = 51' or '34 + 16 = 50' or '50 – 16.80 = 33.20' or '50 – 34.20 = 15.80'	E1	
(b) (£5 saving =) Tea and Cupcake	B1	May be in working or on answer line provided no contradiction or choice; answer line takes precedence.
Appropriate strategy to find the 2 drinks or 2 cakes e.g. at least 2 relevant trials of drinks/cakes or one relevant trial of drinks/cakes and comparison with 16.5(0) or considering how to make the odd 50p or considering the difference between the cost of cakes and the bill to see what drinks are possible	S1	May be awarded for similar strategies used to find the 3 drinks or 3 cakes using £21.50.
2 Flat whites and 2 Cake of the day slices indicated	B2	Implies S1; B1 for either 2 Flat whites or 2 Cake of the day slices May be in working or on answer line provided no contradiction no choice; answer line takes precedence.
	(8)	

Calculating with the Four Operations: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	4	
#4	5	
#5	5	
#6	5	
#7	5	
#8	5	
#9	5	
#10	5	
#11	5	
#12	5	
#13	5	
#14	6	
#15	6	
#16	6	

#17	7
#18	7
#19	7
Total	98

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Marking Scheme

#1

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a) (£)6 + 9 x (£)3 = (£)33	M1 A1	

#2

Component 2: Foundation Tier	Mark	Comment
(b) 780 27 1875	 B1 B1 B1	

#3

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
(£) 106.4(0) 25 (£)1.21 (£) 138.62	B1 B1 B1 B1 (4)	FT 'their £106.40'

#4

Eduqas Autumn 2019 C2 Foundation Tier		Comments
(a) (67 × 5 =) 335(p) or (£)3.35	B1	If units are seen they must be correct. Allow £3.35p.
(b) £1.01 - £0.67 = (£)0.34 or 34(p)	M1 A1	If units are seen, they must be correct. Allow £0.34p.
(c) 3 × 2.95 + 2 × 5.75 = (£)20.35	M1 A1 (5)	If no marks awarded, SC1 for (£)8.85 and (£)11.50 or for 885(p) and 1150(p) seen.

#5

	Mark	Comment
(b) (1100 x 0.58= £)638 or 63800(p)	B1	If units are given, they must be correct.
(c) 490 ÷ 35 OR 4.90 ÷ 0.35 = 14	M1 A1	Allow M1 for 490 ÷ 0.35 or 4.90 ÷ 35 Accept embedded answer e.g. 35 x 14 = 490
(d) 10 – (7.25 + 0.35 + 0.95) or equivalent = (£)1.45 OR 145(p)	M1 A1	10 – 8.55 Allow inconsistent units for M1. If units are given, they must be correct.

#6

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(b) 1300 × 2 ÷ 125 × 43.5(0) (21 × 43.50 =) (£)913.5(0)	 M1 M1 M1 A2	 Method marks may be awarded in any order (= 2600) (= 20.8) CAO Award M3 A1 for (£)904.8(0) (from 20.8 × 43.50) Award M2 SC2 for (£)478.5(0) (from 11 × 43.50) Award M2 SC1 for (£)452.4(0) (from 10.4×43.50)
Alternative method finding t, the number of tubs using trial(s) *Use of trial(s) of* *125 × t OR 125 ÷ 2 × t where t > 8* *t=21 from correct calculations in relevant trial(s) seen* *125 × 20 = 2500, 125 × 21 = 2625,* *OR* *62.5 × 20 = 1250, 0R 62.5 × 21 = 1312.5* *Calculating the cost* *21 × 43.5(0) =* *(£)913.5(0)*	 *M1* *A2* *M1* *A1*	 *A1 if t = 21 but an error in the relevant calculation(s) seen* *If M1 A0 award SC1 for t = 11 with no errors in relevant calculation(s) seen* *125 × 10 = 1250, 125 × 11 = 1375* *FT 'their t' for M1 only* *CAO* *If M1 A0 award SC1 for (£)478.5(0) (from 11 × 43.50)* *Award M1 A1 M1 A1 for (£)904.8(0) (from trial(s) with an error)* *Award M1 SC1 M1 SC1 for (£)478.5(0) (from trial(s) with no error)* *Award M1 SC0 M1 SC1 for (£)478.5(0) (from trial(s) with an error)*

#7

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a)(i) 2 x10.50 + 2 x 9.99 + 3 x 4.50 + 1 x 3.75 (21 +19.98+13.50 + 3.75) = (£)58.23 (ii) (£)60	M1 A1 B1	 FT 'their £58.23' provided at least M1 awarded earlier, and equivalent difficulty.
(b) 2x10.50+9.99 =(£)30.99	M1 A1 (5)	Or equivalent full method.

#8

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
(a) 45 + 13.20 + 0.84 × 5 or 4500 + 1320 + 84 × 5 = (£) 62.4(0) or 6240(p)	M1 A1	May be seen in stages. Allow £62.40p If units are given, they must be correct. If no marks, award SC1 for one of the following: • A correct calculation with a mixture of units e.g.45 + 13.20 + 84 × 5 or sight of (£)478.2(0) • An answer of (£)17.4(0) or 1740(p) (from 13.20 + 0.84 × 5, bracelet omitted) • An answer of (£)49.2(0) or 4920(p) (from 45 + 0.84 × 5, charm omitted)
(b) 5	B1	Allow an embedded answer
(c) 45 + 4×18 – 95 or 117 – 95 = (£) 22	M1 A1	May be seen in stages. If units are given, they must be correct.
	(5)	

#9

Component 2: Foundation Tier	Mark	Comment
(a)(i) (£)6.8(0) or 680 (p)	B1	If units are given, they must be correct. Allow £6.80p.
(a)(ii) (£)0.68 or 68(p)	B1	FT 'their £6.80'. Allow rounded or truncated FT answers. If units are given, they must be correct.
(b) (£)5.45 or 545(p)	B2	B1 for 20 – 3 × 4.85 may be seen in stages, or for sight of (£)14.55 or 1455(p) If units are given, they must be correct.
(c) No seen or implied with a correct reason e.g. 'Catrin only saves money using the voucher if at least one of the items is a sausage or if she orders two portions of mushrooms.' 'She will only save money if she spends over £1.65 (on extra items).' 'She can buy a small breakfast with one egg and one portion of tomatoes for £6.09.' 'Catrin doesn't save money if the extra items are mushrooms and tomatoes.' 'Catrin doesn't save money if the extra items are egg and mushrooms.' 'Catrin doesn't save money if the extra items are both eggs.'	E1	Allow 'No' ticked with a numerical example of £4.85 + two items from the table with a correct total that is less than £6.50. Do not allow e.g. 'It depends on the items.' 'It depends, some of the two items would come to less than the voucher.' 'A breakfast plus two items don't add up to £6.50.' 'It depends, if she orders the more expensive items she will.' (without exemplification)
	(5)	

#10

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(a) (£)2.9(0)	B1	
(b) 5 × 11.25 – 30.50 (£)25.75	M1 A1	 If no marks, award SC1 for 5 × 8.35 – 30.50 = 11.25
(c) Day tickets and (£)25.05	B2	B1 for (£)25.05 only or 3 × 8.35
	(5)	

#11

Component 2: Foundation Tier	Mark	Comment
(a) (£)14.64 or 1464(p)	B1	If units are given, they must be correct. Allow £14.64p
(b) 20 – 5 x 2.49 = (£) 7.55 or 755(p)	M1 A1	May be seen in stages. If units are given, they must be correct. Allow £7.55p
(c) 5 – (2.15 + 0.95) (= (£)1.90) Stapler and Pen	M1 A1	Allow for sight of (£)3.10 Allow M1 A0 for 2.15 and 0.95 stated as their answer
	(5)	

#12

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(a) 0.5 × 10.8(0) + 3 × 0.64 + 4 × 0.49	M1	e.g. 5.4(0) + 1.92 + 1.96 May be in pence Allow M1 for 0.5 × 10.8(0) + 3 × 0.64 + 4 × 49
(£)9.28 or 928(p)	A1	If units are given they must be correct. Allow £9.28p
(b) 0.25 × 10.8(0) + 4 × 0.64 (= 5.26)	M1	May be in pence but units must be consistent for both M marks; implied by sight of 5.26 or 2.7(0) + 2.56 FT 'their 3 × 0.64' from (a) + 0.64 and 0.5 × 'their 0.5 × 10.8' from (a)
10 – (0.25 × 10.8(0) + 4 × 0.64)	M1	FT 'their 0.25 × 10.8(0) + 4 × 0.64' providing <10 and includes use of both 10.8(0) & 0.64 or the sum of the two values 2.7(0) and 2.56 where one is correct
(£)4.74 or 474(p)	A1	FT If units are given they must be correct. Allow £4.74p
	(5)	

#13

Component 2: Foundation Tier	Mark	
(52 – 35.2) ÷ 3 = 5.6 (cm)	M1 A1	May be seen in stages
(85.6 – 35.2) ÷ 5.6 or *35.2 + 9 × 5.6 oe*	m1	FT 'their (52 – 35.2) ÷ 3' *Note: If a candidate is awarded M1 A0 and attempts repeated additions with their incorrect 5.6, there needs to be enough additions to get to a value just below or just above 85.6. They may use a mixture of + 'their 5.6' (1box) and + 'their 16.8' (3boxes) within their additions.*
10 (boxes)	A2	Not from incorrect working A1 for 9 (boxes) If no marks, from a method starting with (52 – 35.2) ÷ 4 = 4.2 award SC2 for 12 boxes from (85.6 – 52) ÷ 4.2 + 4 or (85.6 – 35.2) ÷ 4.2 SC1 for 8 boxes from (85.6 – 52) ÷ 4.2
Alternative method 1 *(52 – 35.2) ÷ 3* *= 5.6 (cm)*	*M1* *A1*	
(85.6 – 52) ÷ 5.6 or *52 + 5.6 + 5.6 + 5.6 + 5.6 + 5.6 + 5.6 oe or*	*m1*	*FT 'their (52 – 35.2) ÷ 3'* *Note: If a candidate is awarded M1 A0 and attempts repeated additions with their incorrect 5.6, there needs to be enough additions to get to a value just below or just above 85.6. They may use a mixture of + 'their 5.6' (1box) and + 'their 16.8' (3boxes) within their additions.*
10 (boxes)	*A2*	*Not from incorrect working* *A1 for 6 (boxes)*
Alternative method 2 *52 – 35.2 = 16.8 with an attempt at repeated additions to get to 85.6. At least 1 addition must be attempted.* *e.g.* *35.2 + 16.8 + ……. or 52 + 16.8 + …….*	*M2*	
35.2 + 16.8 + 16.8 + 16.8 (= 85.6) or *(85.6 – 35.2) ÷ 16.8* *OR* *52 + 16.8 + 16.8 or* *(85.6 – 52) ÷ 16.8*	*m1*	*Note: If the answer to 52 – 35.2 is incorrect and they have attempted repeated additions with their incorrect 16.8 onto either 35.2 or 52. Marks can only be awarded if there are enough additions to get to a value just below or just above 85.6. In this case award M1 m1.* *Note: (85.6 – 35.2) ÷ 16.8 or (85.6 – 52) ÷ 16.8 implies M2. If the answer to 52 – 35.2 is incorrect but the correct divisions are shown with their incorrect 16.8 then award M1 m1.*
10 (boxes)	*A2*	*Not from incorrect working* *A1 for 1 + 3 + 3 + 3 or 4 + 3 + 3* *or 9 boxes or 6 boxes* *(as appropriate for their method)*
	(5)	

#14

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
(a) (63.75 – 3) ÷ 1.35 = 45	M1 A1	May be seen in stages Allow an embedded answer unless contradicted. If no marks, award SC1 for an answer of 61.5(27…) (from 63.75 – 3 ÷ 1.35)
(b) 2 × 35.6 × 4 or 284.8 (cm) or 2 × 0.356 × 4 or 2.848 (m) 400 – (2 ×) 35.6 × 4 or 4 – (2 ×) 0.356 × 4 = 115.2 (cm) or = 1.152 (m)	 M2 m1 A1	Answer line take precedence. May be seen in stages. M1 for either of: • 35.6 × 4 or 142.4 (cm) • 0.356 × 4 or 1.424 (m) FT from M2 or M1 CAO but allow 115 (cm) or 1.15 (m) from correct working. If units are given, they must be correct.
Alternative method *$(\frac{400}{2} - 35.6 \times 4) \times 2$* *or $(\frac{4}{2} - 0.356 \times 4) \times 2$ oe* *= 115.2 (cm) or = 1.152 (m)*	*M3* *A1*	*May be seen in stages.* *M2 for either of:* • *$\frac{400}{2}$ – 35.6 × 4 or 57.6 (cm)* • *$\frac{4}{2}$ – 0.356 × 4 or 0.576 (m)* *M1 for either of:* • *35.6 × 4 or 142.4 (cm)* • *0.356 × 4 or 1.424 (m)* *CAO but allow 115 (cm) or 1.15 (m) from correct working.* *If units are given, they must be correct.*

#15

Component 2: Foundation Tier	Mark	
(b) 69(p) or (£)0.69	B2	If units are given, they must be correct. B1 for (£)5.69 or 569(p) or (3.49 + 1.20 + 1) - 5 If no marks, award SC1 for a correct saving following use of one incorrect item.
(c)(i) 8 × (£)0.95 or 8 × 95(p) (£)7.6(0) 760(p)	M1 A1	Allow M1 if repeated addition of eight lots of 95p If units are given, they must be correct.
(c)(ii) 12.95 ÷ 1.85 = 7	M1 A1	Note: • Allow M1 A1 for an embedded answer of 1.85 × 7 = 12.95. • Award M1 A0 for 1.85 + 1.85 + 1.85 + 1.85 + 1.85 + 1.85 + 1.85 = 12.95 without sight of 7.

#16

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(a)(i) (2.74 + 0.62) × 4 (£)13.44 or 1344(p)	M2 A1	May be in pence but units must be consistent M1 for sight of any one of • 4 × 2.74 (=10.96) • 4 × 0.62 (=2.48) • 2.74 + 0.62 (=3.36) If units are given, they must be correct. Allow £13.44p If no marks, award SC2 for an answer of (£)10.08 or SC1 for (2.74 + 0.62) × 3
(a)(ii) (£)6.56 or 656(p)	B1	FT 'their (£)13.44' If units are given, they must be correct. Allow £6.56p
(b) 2.74 + 0.62 + 1.15 – 3.79 (£)0.72 or 72(p)	M1 A1	May be in pence but units must be consistent FT 'their 3.36' + 1.15 – 3.79 If units are given, they must be correct. Allow £0.72p
	(6)	

#17

Component 2: Foundation Tier	Mark	Comment
(a) (£) 35.25 3 (sets of spades) (£) 16.15 (Total = £) 63.7(0)	B1 B1 B1 B1	 FT their values in the table Allow £63.70p
(b) (£) 6.37 ISW	B1	FT 'their 63.70' from (a)
(c) 6 (Beach balls)	B2	Allow for e.g. 'She can buy 4 and get 2 free.' 'Two lots of 3 balls.' B1 for sight of (£)12.8(0) OR 4 (balls), may be embedded OR 15 ÷ 3.2(0) (= 4.6875) OR £6.40 for three balls
	(7)	

#18

Eduqas Autumn 2019 C2 Foundation Tier		Comments
(a) (£8.12 × 52 weeks) = (£)422.24	B1	
(b)(i) 4 (weeks) × 7.35 = (£)29.4(0)	M1 A1	
(b)(ii) Valid reason e.g. 'she needs to multiply by 13' 'there are more than 48 weeks in the year' 'some months are longer than February' 'February has less days than other months'	E1	Accept 'she needs to multiply by 52' or 'February only has 4 weeks'
(c) 28 + 15. (43 days) × (0.)95 = (£)40.85 or 4085(p) AND Indication that he can afford the ticket. e.g. 'yes >40'	M1 M1 A1 (7)	FT 'their 28 + 15' provided >31 FT 'their 4085(p)' If no marks, award SC1 for either 28 x 0.95 or 15 x 0.95

#19

Component 2: Foundation Tier	Mark	Comment
(a) (£)0.68 + (£)4.45 or 68(p) + 445(p) = (£)5.13 or 513(p)	 M1 A1	 Allow for 68(p) + (£)4.45 If units are given, they must be correct. Allow £5.13p. If no marks, award SC1 for a correct evaluation of either small letter costs added to either parcel costs.
(b) 3 × 1.45 – 3 × 1.05 or 3 × 145 – 3 × 105 or 3 × (1.45 – 1.05) or 3 × (145 – 105) = (£)1.2(0) = 120(p)	 M1 A1	 May be seen in stages. If units are given, they must be correct. Allow £1.20p.
(c) 15.95 ÷ 1.45 oe = 11 (letters)	 M1 A1	 *e.g.11 repeated additions of 1.45* Allow an embedded answer.
(d) Yes, indicated or implied with a correct reason e.g. 'If they are all sent 2nd class.' 'It is only £3.40 to send them all 2nd class.'	 E1	 Allow '68 × 5 = 340(p)' '3.50 ÷ 0.68 = 5.1…' 'There will be 10p to spare.'
	(7)	

Calculating with the Four Operations (Incl. Percentages): Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	6	
#2	7	
#3	10	
Total	23	

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
(a) 42 ÷ 3 (£)14(.00)	 M1 A1	
(b) (120 ÷ 8) × 12 or (120 ÷ 2) × 3 or 120 + (120 ÷ 2) oe (£)180(.00)	 M1 A1	
(c) (18 ÷ 100) × 2 oe (£)0.36 or 36(p) ISW	 M1 A1	If no marks award SC1 for 1% is 18(p) oe If units are given they must be correct, but condone use of both £ and p e.g. £0.36p. If no marks, award SC1 for an unsupported (£)18.36.
	(6)	

#2

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) (Adrian's pay =) $14 \times 22 + (14 \times 1.5) \times (28 - 22)$ $(= 308 + 21 \times 6)$	M3	M2 for (Overtime pay =) $(14 \times 1.5) \times (28 - 22)$ $(= £126)$ M1 for (Overtime rate =) 14×1.5 $(= £21)$
(£)434	A1	CAO If no marks award SC1 for sight of (£)308 (from 14×22) or (£)392 (from 14×28).
(b) (New normal rate of pay =) $330 \div 22$ £15	M1 A1	An indication of £1 extra per hour implies M1A1.
£15 AND £15.40 OR £1 AND £1.40 OR $(\frac{15 - 14}{14} \times 100 =) 7(.142\ldots)\% (< 10\%)$	A1	FT 'their £15' provided M1 awarded and < £15.40. FT 'their £15' - £14 provided M1 awarded and < £1.40. Beware of 7% coming from wrong working.
(b) Alternative method 1 *$14 \times 22 \times 1.1$ or $14 \times 22 + \frac{14 \times 22}{10}$ oe*	*M2*	*FT 'their 14×22' from (a)* *M1 for $\frac{14 \times 22}{10}$ oe*
= (£)338.8(0) (> £330)	*A1*	
(b) Alternative method 2 *$330 - 14 \times 22$ $(= 330 - 308)$* *(10% of 14×22) = $\frac{14 \times 22}{10}$ oe* *Correct comparison of 22 AND 10% of 308*	*M1* *M1* *A1*	*FT 'their 14×22' from (a)* *FT 'their 14×22' from (a)* *22 must come from a correct method.* *10% of 308 may be rounded or truncated.*
	(7)	

#3

Component 1: Foundation Tier	Mark	Comment
(a) 35 × (£)20 = (£)700	B1	
(b)(i) (£)700 + (38 – 35) × (£)20 × 1.5 oe (£)790	M1 A1	e.g. 700 + 3 × 30 or 700 + 4.5 × 20 or 38 × 20 + 3 × 20 × 0.5
(b)(ii) (£)1060 – (£)700 oe (£)360 360 ÷ 30 oe 12 (hours)	M1 A1 M1 A1	FT 'their 360' providing M1 awarded and 'their overtime rate' from (b)(i) provided ≠ 20; may be implied by e.g. a build-up method adding 30 until 'their 360' is reached FT If no marks, award SC2 for an answer of 18 (from 1060÷20 = 53, leading to 53 – 35)
(c)(i) $\frac{6}{100}$ × (£)700= 42 (> 35) OR £1 per hour extra and $\frac{1}{20} = \frac{5}{100} = 5\%$ (< 6%) oe OR $\frac{35}{700} = \frac{5}{100} = 5\%$ (< 6%) oe OR 10% (of £700) = (£)70 5% (of £700) = (£)35, increase is 5% (< 6%) OR $\frac{6}{100}$ × (£)20= 1.2(0) (> 1) with sight of £1 per hour extra	B2	B1 for any one of the following: • $\frac{6}{100}$ × (£)700 • £1 per hour extra • $\frac{35}{700}$ oe
(c)(ii) Valid explanation e.g. 'She might have been earning a lot less per hour than Nico before the pay increase.'	E1	Allow e.g. 'It would be true if she was earning the same as Nico.' 'Dana might not have the same (initial) pay as Nico'. 'It depends on what they were earning initially'. Accept examples which show Dana's statement might not be correct e.g. Dana's initial pay = £500. E0 for reference to only overtime.
	(10)	

Negative Numbers: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
Total	2	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(i) 32	B1	Allow –32
(a)(ii) –40	B1	

Negative Numbers: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
Total	2	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(a) (22 – –14) ÷ 4 or 9 or equivalent	M1	Allow repeated subtraction of 4 nine times with one arithmetic error
17(:)00 or 5 p.m.	A1	An answer of 5 a.m. or 5 o'clock implies M1A0

Powers and Roots: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	2	
#6	2	
#7	3	
#8	3	
#9	4	
#10	4	
Total	22	

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
$21\sqrt{2}$	B1	
	(1)	

#2

Component 1: Foundation Tier	Mark	Comment
(c) 7	B1	Accept ±7; allow –7; Do **not** accept $7 \times 7 = 49$ or just 7×7

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(c) 64	B1	

#4

	Mark	Comment
(a) 1	B1	May be embedded

#5

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(i) 2	B1	
(a)(ii) 5	B1	

#6

Component 1: Foundation Tier	Mark	Comment
(a) 4 and 16	B2	Answer space takes precedence. Allow 2^2 and 4^2. B1 for one of the following: • a final answer of two numbers with a difference of 12, one of which is square, • a final answer of two square numbers, • listing at least three square numbers in their working lines.

#7

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) No indicated and suitable explanation e.g. • 'He has divided by 2 (instead of finding the square root)' • '$200^2 = 40\,000$' • '$\sqrt{40000} = 200$' • '$\sqrt{400}$ = 20'	E1	Allow No with ($\sqrt{400}$ =) 20. Allow No indicated with other suitable reasons e.g. • '200 × 2 = 400, so 200 × 200 is bigger than 400'. • '200 × 200 is not 400'. Do not allow '200 + 200 = 400' without further explanation.
(b) 150	B2	B1 for clear indication of $5^3 = 125$.

#8

Component 1: Foundation Tier	Mark	Comment
(2^3 =) 8 si (6^2 =) 36 si $\frac{2}{9}$ final answer	B1 B1 B1	FT $\frac{\text{'their 8'}}{\text{'their 36'}}$ simplified to a fraction in lowest terms; NB B0 if $\frac{\text{'their 8'}}{\text{'their 36'}}$ is already in lowest terms
	(3)	

#9

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
		Check teacher's comment for values.
Sight of 8 (coins in the purse)	B1	
Sight of (value of coins is) (£)10	B1	
Sight of (greatest and least values are) £2 and 50p	B1	Not just for these in a list of coins, they must be identified in some way as the 2 coins that are 'one 4 times the other' e.g. they may be the only coins stated or they may be circled in a list etc
Correct solution: £2 £2 £2 £1 £1 £1 50p 50p OR £2 £2 £2 £2 50p 50p 50p 50p	B1	CAO
	(4)	

#10

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
*(a) $8\sqrt{7}$	B1	Accept $8\sqrt[2]{7}$ or $8 \times \sqrt{7}$
(b) 26	B1	
(c) 9	B2	final answer; **not from wrong working** B1 for final answer of 3^2
	(4)	

Using a Calculator: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	2	
#4	3	
#5	3	
#6	4	
Total	16	

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Marking Scheme

#1

Component 2: Foundation Tier	Mark	Comment
25·5	B2	B1 for 25·4(8….) or 25·50 If no marks, award SC1 for an answer of 16·7 or 31·2 (from $\sqrt{(1456)} \div 1.3^3 - 0.7$ and $\sqrt{(1456 \div (1.3^3 - 0.7))}$
	(2)	

#2

Component 2: Foundation Tier	Mark	Comment
(a) 9.3	B2	B1 for 9.2(625) If no marks, SC1 for an answer of 2.6 (from incorrect order of operations 2.6 × 5.7 ÷ 3.4 – 1.8)

#3

Component 2: Foundation Tier	Mark	
(a) 8·77	B2	B1 for 8·76(8…) If no marks, award SC1 for an answer of 4.84

#4

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a) (i) 0.7875 (ii) 0.79	B1 B1	Accept 63/80. FT 'their 0.7875' provided that the rounding is of equivalent difficulty.
(b) 1288÷56(=23) OR 1288÷23(=56)	E1 (3)	Allow equivalent methods that use repeated addition or subtraction.

#5

	Mark	Comment
(a) 0.38	B2	B1 for 0.37(647…..)
(b) 4.5×10^{14}	B1 (3)	

#6

	Mark	Comment
$13 \times 6 - 17^3$ or $26 \times 3 - 17^3$ or $39 \times 2 - 17^3$	B1	
1.34×232	B1	Do not accept 134% × 232
0.82×4530	B1	
-4835 and 310.88 and 3714.6	B1	CAO. Independent mark *Misreads: e.g. $5 \times 13 - 17^3 = -4848$ is B0, but FT as misread for possible final B1*
	(4)	

Fractions, Decimals and Percentages: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
#5	1	
#6	1	
#7	2	
#8	2	
#9	2	
#10	2	
#11	3	
#12	4	
Total	21	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 6(%)	B1	

#2

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) Any percentage between $33\frac{1}{3}$ (%) and 40(%) exclusive.	B1	

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(c) $\frac{17}{100}$	B1	Accept 17/100; ignore correct equivalent fractions but do **not** ignore e.g. a change to a decimal or rewriting as an incorrect fraction such as 1/17

#4

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) 0.03	B1	Must be a decimal point not a comma; do not allow 0.03%

#5

Component 1: Foundation Tier	Mark	Comment
(b) 0·08	B1	

#6

Component 1: Foundation Tier	Mark	Comment
(a) 0.315 indicated	B1	

#7

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) $\frac{1}{4}$	B1	
(b) 28(%)	B1	Mark final answer. B0 for a final answer of $\frac{28}{100}$.

#8

Component 1: Foundation Tier	Mark	Comment
(d) $\frac{2}{5}$	B2	Mark final answer. B1 for sight of an equivalent fraction to 0·4 not written in its simplest form e.g. $\frac{4}{10}$

#9

	Mark	Comment
(b)(i) $\frac{31}{100}$	B1	or equivalent fraction
(b)(ii) 31(%)	B1	

#10

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b)(i) $\frac{1}{100}$ or equivalent	B1	
(ii) 0.01	B1	0.01% is B0

#11

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
0·7(0) $\frac{1}{4}$ $\frac{3}{100}$ 0·22	B3	B3 for all 4 correct. B2 for 3 correct. B1 for 1 or 2 correct.
	(3)	

#12

Component 1: Foundation Tier	Mark	Comment
(a) Any decimal between 0·61 and 0·62 exclusive	B1	
(b) Converts each score to a common form to enable comparison e.g. $\left(\frac{18}{25}=\right)\frac{72}{100}$ and $\left(\frac{14}{20}=\right)\frac{70}{100}$ OR 72(%) and 70(%) OR 0·72 and 0·7(0) OR two correct amounts for a comparison	B2	B1 for an attempt to convert <u>both</u> scores to a common form
First test or $\frac{18}{25}$ indicated, with sight of both scores converted to a common form.	B1	STRICT FT 'their pair of values' provided B1 awarded. Award B0 B0 for an unsupported correct answer of first test.
	(4)	

Fractions, Decimals and Percentages: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
Total	5	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
(a) $\frac{7}{50}$	B2	B1 for either of: • $\frac{9+5}{100}$ • $\frac{14}{100}$ or an equivalent fraction that has not been fully simplified Allow B1 for 0.14 B0 for 14% unless changed to a decimal or fraction

#2

GCSE (9-1) Mathematics Component 2: Foundation Tier	**Mark**	**Comment**
(a) (100 ×) 44 ÷ 135 =0.325(…) or 0.326 or 0.33 OR 32.5(…) or 32.6 or 33 (%) A greater proportion of women than men completed the survey.	M1 A1 E1	 Depends on M1 previously awarded. FT their answer for appropriate statement indicated or unambiguously implied If no marks award SC1 for sight of 48(men)
Alternative method *0.32 × 135* *= 43.2(women)* *A greater proportion of women than men completed the survey.*	*M1* *A1* *E1*	 *Depends on M1 previously awarded.* *FT their answer for appropriate statement indicated or unambiguously implied*

Fractions / Percentages as Operators: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	2	
#4	2	
#5	2	
#6	2	
#7	3	
#8	3	
#9	3	
#10	3	
#11	3	
#12	4	
#13	4	
#14	4	
#15	5	
#16	5	

#17	5
#18	6
#19	6
#20	7
Total	73

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(c) $45 \div 9 \times 2$ oe	M1	May be seen in stages. Allow M1 for $\frac{2}{9} = \frac{10}{45}$
10	A1	A0 for a final answer of $\frac{10}{1}$, $\frac{10}{45}$ or $\frac{90}{9}$. Award M0 A0 for a correct answer seen but then spoilt by adding it to, or subtracting it from, 45.

#2

Component 1: Foundation Tier	Mark	Comment
(b)(i) 44(%)	B1	
(b)(ii) 0.87	B1	

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
$(24 \div 12) \times 5$ oe, si	M1	Not for $\frac{5}{12} \times 24$ only; $\frac{10}{24}$ is M0; allow for $\frac{120}{12}$
10 CAO	A1	

#4

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) $650\,000 \div 10$ oe	M1	
$= 65\,000$	A1	Mark final answer. A0 for 65 000%.

#5

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(c) $(32 \div 10) \div 2$ or equivalent	M1	May be in steps
1.6	A1	Allow e.g. 1.60

#6

	Mark	Comment
(d) $45 \div 5 \times 4$ or $45 \times 4 \div 5$ si	M1	Implied by 9×4 or $180 \div 5$; may be in stages
36	A1	CAO

#7

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) Correct first step e.g. $48 \div 3 = 16$ or $2 \times 48 = 96$ or $48 \div 4 = 12$ or $\frac{1}{2} \times \frac{1}{3} \times 48$	B1	
Correct second step e.g. $16 \times 2 = 32$ or $96 \div 3 = 32$ or $12 \times 2 = 24$ or $12 \div 3 = 4$	B1	FT their first step Implies the first B1.
8	B1	FT

#8

Component 1: Foundation Tier	Mark	Comment
(b) 540 (minutes) or $(324 \div 60) \times 5 \div 3$ oe	B2	may be seen in stages B1 for $(324 \div 3) \times 5$ oe or for $324 + (324 \div 60) \times 40$ (= 324 + 216) oe OR for $(324 \div 60) \times 5$ oe or for $(324 \div 60) \div 3$ oe OR for sight of $(324 \div 60 =)$ 5.4 or $5\frac{24}{60}$ (hours)
9 (hours)	B1	9 (hours) implies 3 marks provided not from wrong working. If no marks, award SC1 for their derived time in minutes converted correctly to hours; their time in minutes **and** the division by 60 must be seen

#9

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 100(%) – 18(%) – 15(%) oe OR $1 - \frac{18}{100} - \frac{15}{100}$ oe (common denominator)	M2	May be seen in stages. M1 for either: • $\frac{3}{20} = 15\%$ • (18% + 3/20 =) 33%
= 67(%) ISW	A1	CAO Award M2 A0 for an answer of $\frac{67}{100}$ or 0·67.

#10

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 15 (grandchildren) is $\frac{5}{7}$ si	B1	implied by 15 ÷ 5
3 (grandchildren) is $\frac{1}{7}$ oe si	M1	Implies B1 Allow for sight of 6 (grandchildren in Wales) or for $\frac{5}{7} = \frac{15}{21}$; implied by (15 ÷ 5) × 7
21	A1	CAO

#11

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(iii) 7	B1	
(a)(iv) $\frac{150}{10} \times 4$ or equivalent full method	M1	Any partitioning method must be complete and correct; e.g. 'their 10% of 150' × 4 or 'their 50% of 150' – 'their 10% of 150';
60	A1	

#12

Component 1: Foundation Tier	Mark	Comment
(b) (48 ÷ 4 =) 12	B1	May be embedded
(45 ÷ 5) × 2	M1	
18	A1	May be embedded; 80 + 12 – 18 or 80 – 18 + 12 earns B1 M1 A1
(80 + 12 – 18 =) 74	B1	FT 'their derived 12' and 'their derived 18'

#13

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) 20 ÷ 5 × 3 oe =12	M1 A1	May be seen in stages. Mark final answer. Award M1A0 for a final answer of $\frac{12}{20}$.
(c) 50 ÷ 10 × 7 oe =35	M1 A1	May be seen in stages. Mark final answer. A0 for 35%.

#14

Component 1: Foundation Tier	Mark	Comment
(a)(iii) 30 ÷ 5 × 2 or $\frac{2}{5}$ × 30 or equivalent	M1	May be seen in stages.
12	A1	ISW
(a)(iv) 70 ÷ 10 × 3 or 0·3 × 70 or equivalent	M1	May be seen in stages.
21	A1	ISW

#15

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) $\frac{46}{2}\times 7$ or equivalent	M1	May be in steps.
161 (pupils)	A1	
(b) A correct sum or difference e.g. $\frac{5}{8}+\frac{3}{40}$ or $\frac{7}{10}-\frac{3}{40}$ or $\frac{7}{10}-\frac{5}{8}$ or equivalent	B1	May be earned later.
Sight of two fractions with a common denominator equivalent to any two of $\frac{5}{8},\frac{7}{10},\frac{3}{40}$	B1	e.g $\frac{25}{40},\frac{28}{40}$ or $\frac{50}{80},\frac{56}{80}$; May be in a sum or difference e.g. $\frac{25}{40}+\frac{3}{40}$ or $\frac{28}{40}-\frac{3}{40}$ or $\frac{28}{40}-\frac{25}{40}$ Allow any correct common denominator; may imply previous B1
Yes with a correctly evaluated sum or difference appropriately simplified or Yes following sight of $\frac{25}{40},\frac{28}{40}$ or a pair of equivalent fractions	E1	From a sum or difference, e.g. $\left(\frac{25}{40}+\frac{3}{40}=\right)\frac{28}{40}=\frac{7}{10}$ or $\left(\frac{28}{40}-\frac{3}{40}=\right)\frac{25}{40}=\frac{5}{8}$ or $\left(\frac{56}{80}-\frac{50}{80}=\right)\frac{6}{80}=\frac{3}{40}$ if no sum or difference stated then maximum 2 marks (B0 B1 E1)
		Alternative method: *(or equivalent in percentages)* *0.7 – 0.625* *B1* *= 0.075* *B1* *Yes with* $\frac{75}{1000}=\frac{3}{40}$ *E1*
	(5)	

#16

Component 1: Foundation Tier	Mark	Comment
(a) A correct method which would lead to 12% of 750 e.g. 75 + 7·5 + 7·5 oe	M1	May be seen in stages.
(£)90(.00) ISW	A1	
(b) $\frac{7}{15}-\frac{2}{5}$ OR for sight of $\frac{6}{15}$	B1	B0 for unsupported $\frac{5}{10}$
$\frac{1}{15}$ oe	B2	B1 for $\frac{7}{15}-\frac{6}{15}$ oe
	(5)	

#17

Component 1: Foundation Tier	Mark	Comment
(Number of CDs =) $120 \div 5 \times 3$ oe	M1	
72	A1	
(Number of Vinyl=) $\frac{15}{100} \times 120$ oe	M1	Must be a complete method which would lead to the correct answer.
18	A1	
(Number of digital downloads = $120 - 72 - 18 =$) 30	B1	FT providing at least M1 M1 previously awarded and their '72 + 18' < 120
Alternative method: $\frac{3}{5} = \frac{60}{100}$ *or* $\frac{3}{5} \times 100$	*M1*	
(Percentage of albums that are CDs =) 60%	*A1*	
(Percentage of albums that are digital downloads = 100 – 60 – 15 =) 25%	*B1*	*FT 'their 60%' provided unambiguously stated.*
$\frac{25}{100} \times 120$ *or* $120 \div 4$ oe	*M1*	*FT 'their 25%' provided not 50%.*
30	*A1*	FT
	(5)	

#18

Component 1: Foundation Tier	Mark	Comment
(a) $342 + \frac{342}{10} \times 2$ oe, si	M2	M1 for $\frac{342}{10} \times 2$ oe (= £68.4(0))
(£)410.4(0)	A1	
(b) $57 \times 6 \div 3$ oe, si	M2	M1 for one of the following: • 57×6 (= 342) • $57 \div 3$ (= 19) • ¼ is 2 payments • ¾ is 6 payments
(£)114(.00)	A1	
	(6)	

#19

Component 1: Foundation Tier	Mark	Comment
(a) $(300 \div 100) \times 8$ oe	M1	Full method; may be in stages; may be a build-up method e.g. '1% = 3, 2% = 3 + 3, 4% = 6 + 6, 8% = 12 + 12' or '10% = 30, 5% = 15, 1% = 3, 15 + 9'
(£)24(.00)	A1	Allow £24.00p or 2400p; mark final answer
(b) (15 ÷ 3 =) (£)5(.00) oe	B1	If units are given they must be correct;
$8 \div 10 \times 6$ or $800 \div 10 \times 6$ oe	M1	May be a build-up method e.g. 10% = 0.80, 50% = 4, 10% + 50 % = 0.80 + 4; Allow for $\frac{60}{100} \times 800$ or $\frac{60}{100} \times 8$
(£)4.8(0) or 480(p)	A1	CAO; implies M1
(4.80 + 5 =) (£)9.8(0) or 980(p)	B1	FT 'their 5' + 'their 4.8(0)' providing correct method shown for each Allow £9.80p; correct answer implies 4 marks provided not from wrong working; mark final answer
Alternative method *(15 ÷ 3 × 2 =) (£)10(.00) oe*	*B1*	
8 ÷ 10 × 4 or 800 ÷ 10 × 4 oe	*M1*	*May be a build-up method e.g.* *10% = 0.80, 50% = 4, 50% – 10% = 4 – 0.80 ;* *Allow for* $\frac{40}{100} \times 800$ *or* $\frac{40}{100} \times 8$
(£)3.2(0)or 320(p)	*A1*	*CAO; implies M1*
(15 + 8 – 10 – 3.20 =) *(£)9.8(0) or 980(p)*	*B1*	*FT 23 – 'their 10' + 'their 3.2(0)' providing correct method shown for each* *Allow £9.80p; correct answer implies 4 marks provided not from wrong working;* *mark final answer*
	(6)	

#20

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) $2\times240-\frac{2\times240}{3}$ oe	M1	Method for cost of tablet(s) without postage Accept for $240-\frac{240}{3}$; not for use of 33% etc
(£) 320	A1	CAO
320 + 2 × 9.99	M1	FT 'their derived 320'; allow if 33% etc attempted; do not allow for 480 + 2 × 9.99
(£)339.98	A1	FT 'their derived 320' If M1 A0 M0 then award SC1 for a final answer of 169.99 (one tablet) or if no marks, award SC2 for a final answer of 333.32 ($\frac{1}{3}$ off inc postage) or SC1 for 499.98 $-\frac{499.98}{3}$ (may be in steps)
(b) 108 × 4 × 2 oe	M2	May be in steps M1 for 4 × 108 (= 432)
864	A1	CAO
	(7)	

Fractions / Percentages as Operators: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
#4	3	
#5	3	
#6	3	
#7	3	
#8	4	
#9	4	
#10	5	
#11	6	
#12	6	
#13	7	
#14	8	
#15	9	
Total	69	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(a) 0.69 × 118 oe	M1	May be in steps
81.42 (p)	A1	An answer of 81 or 0.8142 is awarded M1 A0

#2

GCSE (9-1) Mathematics Component 2: Foundation Tier	**Mark**	**Comment**
(a) 6500 – (12.5 × 6500) ÷ 100 or 6500 × (100 – 12.5) ÷ 100 oe (£) 5687.5(0)	M2 A1	M1 for (12.5 × 6500) ÷ 100 oe or (£)812.5(0) If a partitioning method is used to find 12.5%, it must be a fully correct method.

#3

GCSE (9-1) Mathematics Component 2: Foundation Tier	**Mark**	**Comment**
(b) 0.4 × 0.2 × 225 oe 18	 M2 A1	 M1 for 225 × 0.4 or 90 OR 0.4 × 0.2 or 0.08 oe CAO

#4

Eduqas Autumn 2018 Component 2: Foundation Tier	**Mark**	**Comment**
(b) (i) 0.14 x 16000 (£)2240 (ii) (£16000 - £2240 = £)13760	M1 A1 B1	Accept equivalent correct method. FT 'their 2240'

#5

Eduqas Autumn 2018 Component 2: Foundation Tier	**Mark**	**Comment**
(b) 2440 ÷ 8 x 5 OR 2440 ÷ 8 x 3 1525 OR 915 (2440 – 1525 =) 915 AND (2440 – 915 =) 1525 Mass of Strawberries 1525 (g) Mass of Raspberries 915 (g)	M1 A1 B1	 B1 awarded if the sum of their answers is 2440, provided M1 awarded.

#6

Eduqas Autumn 2019 C2 Foundation Tier		Comments
(c) 48% of 3650 (=1752) 1752 × 3400 = (£)5 956 800	M1 M1 A1	 FT 'their 1752' CAO

#7

Component 2: Foundation Tier	Mark	Comment
(b) 0.18 x 160 oe $\frac{2}{3}$ × 43.2 or 43.2 ÷ 3 × 2 oe = 28.8	M1 M1 A1	May be seen in stages. May be seen in stages. Sight of 28.8 is awarded M1 A1. Both calculations needed for full marks.

#8

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
280 + 0.12 x 280 or equivalent = (£) 313.6(0) (313.6(0) ÷ 8 =) (£)39.2(0) (each) or (39 x 8 =) (£)312 Decision e.g. 'Gordon is wrong as this needs rounding up to (£)40 so that they add at least 12%' or 'Gordon is wrong as they have added less than 12%'. '£39 is not enough as each needs to pay £39.20 (or more)'	M1 A1 B1 E1 (4)	 FT 'their 313.60' ÷ 8 FT 'their (£)313.6(0) or (£)312 or (£)39.20' with correct interpretation provided at least 2 marks previously awarded. You may see total 314÷8 or 320÷8 = 40. *Alternative method 1:* *39 x 8 = 312* *B1* *312 – 280 = 32* *M1* *32÷280x100 = 11.4(%)* *A1* *No, e.g. '11.4% is less than 12%'* *E1* *Alternative method 2:* *280÷8 = 35* *B1* *35 x 1.12 or equivalent* *M1* *(£)39.2(0)* *A1* *Gordon wrong because (£)39 is not enough* *E1*

#9

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
(b) 456 ÷ 4 oe = 114 (g)	M1 A1	 Mark final answer
(c) 0.36 × 1350 oe = 486 (g)	M1 A1	 Mark final answer

#10

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(b) 237 ÷ 100 x 360 853.2	M1 A1	*Alternative method:* 0.37x360 + 360 + 360 M1 853.2 A1
(c) $\frac{1750}{2015}$ (x 100) = 86.8 (%) The trailer is in the ACCEPTABLE range.	M1 A1 E1	FT 'their derived %' dependent on M1 awarded. Alternative method: 0.85 x 2015 M1 = 1712.75 A1 So ACCEPTABLE. E1 dep on M1

#11

Component 2: Foundation Tier	Mark	Comment
(a) (3000 – 500 =) (£) 2500 0.37 × 2500 ÷ 5 oe = (£)185	 B1 M2 A1	 FT 'their 2500' including 3000 M1 for 0.37 × 2500 or (£)925 CAO
(b) $\frac{600}{3000}$ (× 100) oe = 20(%)	M1 A1	
	(6)	

#12

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
(a) 104/100 x 1240 = 1289.6	M1 A1	Or equivalent full method.
(b) '=' written in the box AND sight of 16.8 or 35 x 48 ÷ 100 or equivalent.	B2	B1 for sight of 16.8 or 35 x 48 ÷ 100 or equivalent with incorrect sign or missing sign.
(c) (100 x) 19 ÷ 24 (= 0.79166…) OR 0.75 x 24 (= 18) Seren (did better) with sight of either (0.)79(166…) or 18 as appropriate	M1 A1 (6)	

#13

Component 2: Foundation Tier	Mark	Comment
(Swimming) 2/3 x (320 + 7.25 x 5) or (320 + 7.25 x 5) – 1/3 x (320 + 7.25 x 5)	M2	May be seen in stages Award M1 for one of the following: • 320 + 7.25 x 5 (= 356.25) • 1/3 x (320 + 7.25 x 5) (= 118.75) • 2/3 x 'their total cost'
(£)237.5(0)	A1	CAO If units are given, they must be correct.
(Adventure centre) 0.85 x 13.6(0) x 25 or 13.6(0) x 25 – 0.15 x 13.6(0) x 25	M2	May be seen in stages Award M1 for one of the following: • 13.6(0) × 25 (= 340) or • 0.15 × 13.6(0) x 25 (= 51) or • 0.85 × 13.6(0) × n where n ≥ 1
(£)289	A1	CAO If units are given, they must be correct.
(Malik's choice) Swimming party clearly indicated	B1	STRICT FT provided at least M1 previously awarded and a total cost for each party is found.
	(7)	

#14

Component 2: Foundation Tier	Mark	
(a) 0.22 × 250 = 55 ISW (for calculating value)	 M1 A1	 Or equivalent complete and correct method. Allow M1 A1 for an answer of £55
(b) 250 ÷ 5 × 2 = 100 ISW (for calculating value)	 M1 A1	 Or equivalent complete and correct method. May be seen in stages. Note: M0 if method seen but then spoiled e.g. 250 ÷ 5 × 2 − 55 If no marks, award SC1 for unsupported £20
(c) 250 – 55 – 100 or (1 – 0.22 – 0.4) × 250 oe = 95 (10p coins) 55 × (£)1 + 100 × (£) 0.20 + 95 × (£) 0.10 (= £55 + £20 + £9.50) or 55 × 100(p) + 100 × 20(p) + 95 × 10(p) (= 5500p + 2000p + 950p) = (£) 84.5(0) or 8450(p)	 M1 A1 M1 A1	 FT 250 – 'their 55' – 'their 100', provided 'their 55' + 'their 100' < 250 and are a whole number of coins FT. Sight of £9.50 implies M1 A1. May be seen in working. FT 'their derived 95', 'their 55' and 'their 100', provided 'their 55' + 'their 100' < 250 and are a whole number of coins Allow M1 A0 if inconsistent place value used unless corrected. FT If units are given, they must be correct.
	(8)	

#15

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(a) 68 + 232 ÷ 8 (= 68 + 29 = 97) (300 – 97) × 72 (= 14 616)	 M1 M2	Allow equivalent working in litres FT 'their 97' provided it is not 68 or 232 M1 for 300 – 97 (= 203)
14 616 ÷ 2000 (= 7.308) or 7 bottles = 14 000	M1	FT 'their 14 616'; provided at least M2 previously awarded; implied by sight of 7.3(...)
8	A1	CAO with no incorrect working seen An answer of 8 does not imply full marks but allow full marks if the first 3 marks have been awarded and an answer of 8 stated
Alternative method *68 × 72 + 232 ÷ 8 × 72* *(= 4896 + 2088 = 6984)*	*M2*	*M1 for 232 ÷ 8 × 72*
72 × 300 – (68 × 72 + 232 ÷ 8 × 72) *(= 14 616)*	*M1*	*FT 'their 68 × 72 + 232 ÷ 8 × 72'*
14 616 ÷ 2000 (= 7.308) or *7 bottles = 14 000*	*M1*	*FT 'their 14 616'; provided at least M2 previously awarded; implied by sight of 7.3(...)*
8	*A1*	*CAO with no incorrect working seen* *An answer of 8 does not imply full marks but allow full marks if the first 3 marks have been awarded and an answer of 8 stated*
(b) (cost of fruit for one glass =) 108 ÷ 6 + 56 ÷ 8 (= 25p or £0.25)	 M1	may be in pounds or pence but units must be consistent
$25 + \frac{60}{100} \times 25$ oe	M2	For M2 or M1, FT 'their derived 25' provided obtained using 108(p) and 56 (p) or equivalent; M1 for $\frac{60}{100} \times$ 'their 25' oe
40(p) or (£)0.40	A1	CAO If units are given they must be correct. Allow £0.40p
Alternative method *(cost of fruit for 72 glasses =)* *72(1.08 ÷ 6 + 0.56 ÷ 8) (= £18 or 1800p)* *or 72 ÷ 6 × 1.08 + 72 ÷ 8 × 0.56* *or 12 × 1.08 + 9 × 0.56*	*M1*	*may be in pounds or pence but units must be consistent;*
$\left(18 + \frac{60}{100} \times 18\right) \div 72$ (= 28.80 ÷ 72) oe	*M2*	*For M2 or M1, FT 'their derived 18' provided obtained using 108(p) and 56 (p) oe;* *M1 for* $\frac{60}{100} \times$ 'their 18' *oe*
40(p) or (£)0.40	*A1*	*CAO* *If units are given they must be correct.* *Allow £0.40p*
	(9)	

Fractions: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
Total	4	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) $\frac{2}{3}$ $\frac{30}{45}$ $\frac{4}{6}$	B2	B1 for any two correct with none incorrect or for all 3 correct with one extra

#2

Component 1: Foundation Tier	Mark	Comment
(b) $\frac{4}{5}$	B2	B1 for one of the following: • $\frac{240}{300}$ oe • a fully simplified answer of $\frac{240}{\text{'their 240 + 60'}}$. • $\frac{1}{5}$ (working with tulips)

Fractions: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	1	
Total	4	

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Marking Scheme

#1

Eduqas Autumn 2019 C2 Foundation Tier		Comments
(d) $^{1103}/_{1960}$ or $^{27575}/_{49000}$ ISW	B1	Or equivalent fraction

#2

Component 2: Foundation Tier	Mark	
(b) One third unambiguously indicated	B1	Note: If they circle an option and write something different on the answer line then the answer line takes precedence.

#3

Component 2: Foundation Tier	Mark	Comment
(b) Any 6 small triangles shaded	B1	

#4

Component 2: Foundation Tier	Mark	Comment
(b) 6 small triangles shaded	B1	

Percentages: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	2	
Total	6	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(c) $\frac{820}{10} \times 7$ or 82×7 or $\frac{820}{100} \times 170 - 820$ oe si	M1	May be seen in stages; allow even if answer then spoiled by e.g. being added to or subtracted from 820
(£) 574 (.00) CAO	A1	Mark final answer If no marks award SC1 for final answer 1394

#2

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(c) $\frac{6}{600}[\times 100]$ oe 1	M1 A1	Or 1% is 600 ÷ 100; may be in steps

#3

Component 1: Foundation Tier	Mark	Comment
40(%)	B2	B1 for $\frac{2}{5}$ or $\frac{8}{20}$ oe ISW
	(2)	

Percentages: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
Total	2	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(c) 200(%)	B1	

#2

Eduqas Autumn 2019 C2 Foundation Tier		Comments
(a) 37(%)	B1	

Reverse Percentages: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	4	
Total	7	

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
$\frac{1008}{60}\times100$ or $\frac{1008}{0.6(0)}$ or $\frac{1008}{6}\times10$ or $\frac{10080}{6}$ oe	M2	M1 for one of the following: • $\frac{1008}{6}$ (=168) (Calculating 10% of original value) • $\frac{1008}{60}$ (=16.8) (Calculating 1% of original value) • $0.6\times x = 1008$ oe
(£)1680(.00)	A1	
	(3)	

#2

GCSE (9-1) Mathematics Component 1: Foundation Tier	**Mark**	**Comment**
(a) (£)72	B2	B1 for 54 ÷ 3 x 4 OR 54 ÷ 0·75 oe
(b) (i) 0.67	B1	
(b) (ii) 1.06^3	B1	
	(4)	

Best Buys: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	4	
#4	5	
#5	5	
#6	5	
#7	5	
#8	5	
#9	6	
Total	40	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 16 tablets indicated and full justification e.g. 'Small bottle: 48 tablets costs £6.60, Large bottle: 48 tablets costs £7' or '24 of the smaller bottle would be £3.30' or 'Small bottle: 13(· ...)p per tablet, Large bottle: 14(·...)p per tablet' or The extra 8 tablets costs an extra £1.30. Half a bottle of 16 tablets costs £1.10.	B2	Allow e.g. 13p r 12 and 14p r 14 B1 for a correct decision and a partial justification e.g. 'Smaller bottle costs £1.10 for 8 tablets.' or '24 of the smaller bottle would be 'their 3.30.' or 'Small bottle: 13(· ...)p per tablet' or an attempt at full justification with an arithmetic error and their decision follows their working or full justification and 24 tablets indicated A statement of '8 tablets costs an extra £1.30' only is B0 even if they indicate the small bottle

#2

Component 1: Foundation Tier	Mark	Comment
Calculations that allow comparison e.g. 250 ÷ 10 AND 300 ÷ 3,	M1	
25(p) OR 27(p)	A1	
25(p) AND 27(p) with 1000ml indicated	A1	If units are given, they must be correct for M1 A1 A1. Note: 3000ml / 100ml / 1ml 1000 ml: £7.50 / £0.25 / £0.0025 300 ml: £8.10 / £0.27 / £0.0027 ml per p / ml per £ / p per ml / £ per ml 1000 ml: 4 / 0.004 / 0.25 / 0.0025 300 ml: 3.703… / 0.003.. / 0.27 / 0.0027
Alternative method *250 ÷ 10 × 3 OR 81 ÷ 3 × 10* *75(p) OR 270(p)* *1000ml indicated*	*M1* *A1* *A1*	*Candidates may work in pounds or pence.* *If units are given, they must be correct for M1 A1*
	(3)	

#3

Component 1: Foundation Tier	Mark	Comment
(a) Valid explanation with comparison or correct use of more/less e.g. • 'The price per 100g should be 40p'. • 'The flapjacks would cost £10 if they cost £4 per 100g'. • 'For £4 I should get 1000 g of flapjacks'. • '250g is **more** than £1 because its £4 **per** 100g'. • 'If £4 for 100g then 250g should cost **more** than £1'. • 'The shop meant to put 25g not 250g'. • '100g should be **less** than the supermarket's price as they sell 250g for £1'.	E1	If calculations are given, they must be correct. Allow 'The price per 100g is far **too high**.' Do not allow 'It says 250g for £1 so it can't be 100g for £4'.
(b) Method to find both unit costs e.g. • 150 ÷ 5 (cost for 10 biscuits) and 96 ÷ 3 (cost for 10 biscuits) OR • 150 × 3 (cost for 150 biscuits) and 96 × 5 (cost for 150 biscuits) OR • 150 ÷ 50 × 30 (cost for 30 biscuits) oe OR • 96 ÷ 30 × 50 (cost for 50 biscuits) oe	M2	Calculations may be in pounds or pence. Accept alternative convincing methods e.g. 50 ÷ 150 and 30 ÷ 96 (biscuits per penny) M1 for attempting to find the cost of a common factor/multiple of biscuits for <u>either</u> pack e.g. • 150 ÷ 5 • 96 ÷ 3 • 150 × 3 • 96 × 5 • 150 ÷ 50 • 96 ÷ 30 Or M1 for 50 ÷ 150 OR 30 ÷ 96
Correct unit costs e.g. • 30p and 32p (per 10 biscuits) OR • £4.50 and £4.80 (per 150 biscuits) OR • 90(p for 30 biscuits) OR • 160(p for 50 biscuits) **AND** 50 biscuits indicated.	A1	Allow for e.g. 3 (p per biscuit) and 3 r 6 (p per biscuit) **AND** 50 biscuits indicated. If units are given, they must be correct.
	(4)	

#4

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) $(\frac{25}{100}\times 50$ = £) 12.5(0)	B1	
(Shot on Goal = £) 62.5(0)	B1	FT 'their $\frac{25}{100}\times 50$'; implies the first B1
Sight of (£) 59.99 and correct choice	B1	Correct choice FT 'their (£) 62.50' Correct choice e.g. 'Shirts Glorious Shirts' may be implied; Allow sight of (£) 60 (.00) and correct choice
(b) $276 \div 12$	M1	seen or implied; implied by e.g. repeated subtraction or $12 \times 23 = 276$
(£) 23(.00)	A1	
	(5)	

#5

	Mark	Comment
(a) $12 \times 4.5(0)$	M1	Must be seen
54	A1	CAO; not from wrong working; sight of 54 does not imply M1 A1
Valid conclusion e.g. 10% of 60 = 6 **and** 60 – 54 = 6 or 60 – 54 = 6 **and** $\frac{6}{60}=\frac{1}{10}$ (=10%) or 60 – 6 = 54	A1	or equivalent
Alternative method: *60 ÷ 12*	*M1*	Must be seen
5	*A1*	
Valid conclusion e.g. *10% of 5 = 0.5(0) **and** 5 – 4.5(0) = 0.5(0)* *or 5 – 4.5(0) = 0.5(0) **and** $\frac{0.5}{5}=\frac{1}{10}$ (=10%)*	*A1*	
(b) 630 ÷ 30 si	M1	Allow for 630 ÷ *k*, where *k* = 28, 29 or 31; may be in stages but 600 ÷ 30 only is M0
21	A1	CAO; allow for e.g. $30\overline{)630}$ 21
	(5)	

#6

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
$\frac{50}{100} \times 24 \times 30 + 25$ oe	M1	May be in stages
(£)385(.00)	A1	
30×13	M1	
(£)390(.00)	A1	A1 May also be awarded for comparison of $30 \times 13 = 30 \times 12 + 30$ and $30 \times 12 + 25$
Supadeal Carpets and £5	A1	FT 'their 390 – 385' and 'their Supadeal Carpets' provided at least M1 earned If no marks, award SC1 for $24 \times 30 = 720$ or $24 \times 30 + 25$ or 12×30 or 360 seen
	(5)	

#7

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) (Double plus rooms =) $160 + \frac{3}{4} \times 160$	M1	oe; may be embedded
(£) 280.00	A1	implied by correct answer
(Family room =) $80 \times 3 + 12$	M1	oe; may be embedded
(£)252(.00)	A1	implied by correct answer
(£)28(.00)	B1	FT double plus cost – family room cost = 'their 280' – 'their 252' provided at least M1 previously awarded. Common FT answer is 320 – 252 = 68 Treat consistently using the wrong row of the table as a misread

#8

GCSE (9-1) Mathematics Component 1: Foundation Tier	**Mark**	**Comment**
(LunarSat = 12×50 =) (£)600 $(12 - 2) \times 55 + 35$ or $(12 \times 55 - 2 \times 55) + 35$ oe	B1 M2	M1 for $(12 - 2) \times 55$ (= 550) or $12 \times 55 - 2 \times 55$ (= 550) or $12 \times 55 + 35$ (= 695) oe
(£)585	A1	CAO
A1 Cable and 15	B1	FT for correct decision using 'their 600' and 'their 585'; accept any unambiguous indication of A1 Cable NB answer A1 Cable and £15 without working does not score. (They could be getting 15 from 50 – 35.)
	(5)	

#9

Component 1: Foundation Tier	Mark	Comment
(a) $5 \times 0.98 - 4.50$ OR $5 \times (0.98 - \frac{4.50}{5})$	M2	May be in £ or p but must be consistent. M1 for either: • 5×98p (= 490p) oe • $(0.98 - \frac{4.50}{5})$ (= £0.08) oe;
(£) 0.4(0) OR 40 (p)	A1	Allow £0.40p but not 0.4(0)p
(b) (£)10 - 4 × (£)0.90 (= £6.40)	M1	May be in £ or p but must be consistent.
(£)6.4(0) ÷ (£)1.25 oe	m1	FT their 'derived £6.40'. Allow M1 for either: • sight of 1.25 × 5 (= 6.25) • at least two trials of 1.25 × n = 'their 6.4(0)' where $n > 1$.
5 (cinnamon whirls)	A1	Provided no incorrect working seen. No marks awarded for an unsupported answer of 5.
Alternative method *$4 \times$ (£)0.9(0) + $5 \times$ (£)1.25 (= £9.85) oe*	*M2*	*M1 for at least two trials of $4 \times 0.9 + n \times 1.25$ where $n > 1$.*
5 (cinnamon whirls)	*A1*	
	(6)	

Best Buys: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
#4	3	
#5	4	
#6	7	
Total	22	

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Marking Scheme

#1

Component 2: Foundation Tier	Mark	Comment
Calculations that allow comparison e.g. (100g) 2.21/5 AND 3.78/9 =(£)0.44(2..) =(£)0.42 AND 900g indicated	M1 A1	e.g. (4500g) 2.21 × 9 AND 3.78 × 5 =(£)19.89 = (£)18.90 AND 900g indicated If units are given, they must be correct. Note:
	(2)	

	g per p	p per g
500g	2.26…	0.442
900g	2.38…	0.42

#2

Eduqas Autumn 2018 Component 2: Foundation Tier	**Mark**	**Comment**
(b) Rides / With / Without 3 / 15 / 14.4(0) 4 / 18 / 19.2(0) Conclusion, 4 (rides) inserted or implied in working.	 B1 B1 E1	 OR (3 × £1.80 = £)5.4(0) OR (4 × £1.80 = £)7.2(0) If neither B1 marks awarded, award B1 for sight of (£)14.4(0) AND (£)19.2(0)

#3

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
Attempts to find a unit cost e.g. per 100 ml (£)1.74 ÷ 4 , (£)3.01 ÷ 7, (£)3.96 ÷ 9	M1	For at least 2 of the 3 bottles
Finds a unit cost e.g. per 100 ml (£)0.435, (£)0.43, (£)0.44	A1	For correct unit costs for at least 2 of the 3 bottles Ignore incorrect units
All unit costs correct and medium bottle indicated	A1	They may use different unit costs to compare small with medium and then medium with large, so it may be in steps; units may be omitted but must be consistent.
	(3)	

	pence per ml	ml per £
400ml	0.435p	229.88...
700ml	0.43p	232.55...
900ml	0.44p	227.27...

#4

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
Method of comparison e.g. per 25ml, ml per penny or similar Correctly evaluated calculations for at least two of the three sizes AND appropriate conclusion OR Correctly evaluated calculations that should enable comparison of all three.	M1 A1	Needs to show attempt to compare at least two of the three Ignore incorrect units 3000 ml / 25 ml / 100 ml / per p / ml per £ 200 ml: £14.70 / 12.25p / 49p / 2.04.. ml / 204(.0..) ml 375 ml: £14.40 / 12p / 48p / 2.08.. ml / 208(.3..) ml 500 ml: £13.80 / 11.5p / 46p / 2.17.. ml / 217(.3..) ml
Correctly evaluated comparison of all three sizes, may be different comparisons at different stages AND correct conclusion "large bottle is best value for money"	A1	Consistent units that are not obviously incorrect are required or allow no units given. Comparison of small/med and med/large is comparison of all three. Comparison of small/med and small/large is not a comparison of all three.
	(3)	

#5

Component 2: Foundation Tier	Mark	Comment
3 × 352 + 43 × 3 × 7 + 85 × 3 OR (352 + 43 × 7 + 85) × 3	M2	May be seen in stages. 1056 + 903 + 255 OR 738 × 3 M1 for any one of the following: • 3 × 352 + 43 × 3 + 85 × 3 1056 + 129 + 255 (= 1440) • (352 + 43 + 85) × 3 480 × 3 (= 1440) • 4 × 352 + 43 × 4 × 7 + 85 × 4 1408 + 1204 + 340 (= 2952) • 3 × 352 + 43 × 3 × 7 + 85 × 3 × 7 (= 3744) 1056 + 903 + 1785
= (£) 2214 ISW	A1	FT providing at least M1 awarded.
(Cheaper option) Pay separately	B1	FT their answer providing at least M1 previously awarded. If no marks, award SC1 for the three correct costs (Flights = 1056, Accommodation = 903, Food = 255) OR for 738 (the cost for one person)
	(4)	

#6

Component 2: Foundation Tier	Mark	Comment
(Option A) (485 ÷ (1+4) x 4) ÷ 8 or (485 - $\frac{485}{1+4}$) ÷ 8 or (485 ÷ (1+4)) ÷ 2 = (£) 48.5(0)	M2 A1	M1 for 485 ÷ (1+4) x 4 or 485 - $\frac{485}{1+4}$ (= 388) or 97:388
(Option B) 0.88 × 485 (÷ 10) or 485 - 0.12 × 485 (÷ 10) oe = (£) 42.68	M2 A1	(= 426.8 (÷ 10)) M1 for 0.12 × 485 (= 58.2) oe
B and (£) 42.68	B1	FT provided at least M1 M1 previously awarded.
Alternative method *(100 ÷ (1+4) x 4) ÷ 8* *or (100 - $\frac{100}{1+4}$) ÷ 8* *= 10 (%)*	*M2* *A1*	*M1 for 100 ÷ (1+4) x 4 or 100 - $\frac{100}{1+4}$ (= 80)*
(100 – 12) ÷ 10 *= 8.8 (%)*	*M2* *A1*	*M1 for 100 – 12 or 88*
B and (£) 42.68	*B1*	*FT provided at least M1 M1 previously awarded.*
	(7)	

Exchange Rates: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
#3	4	
#4	5	
Total	15	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) (2 – 1.70) × 400 oe 120	M2 A1	M1 for 2 × 400 (= 800) or for 400 × 1.7[0] (= 680) or for 2 – 1.7(0) (= 0.3(0)) CAO

#2

Component 1: Foundation Tier	Mark	Comment
Both to £: 110 × 0.9(0) oe or 99 **and** 125 ÷ 1.25 oe or 100 OR € to £ and £ to $: 110 × 0.9(0) oe or 99 **and** 99 ×1.25 oe or 123.75 OR $ to £ and £ to €: 125 ÷ 1.25 oe or 100 **and** 100 ÷ 0.9(0) oe or 111.11… Germany indicated with (£)99 and (£)100 seen OR (£)99 and ($)123.75 seen OR (£)100 and (€)111.11 seen	M2 A1	Allow e.g. 1.25 × 100 = 125 for 125 ÷ 1.25; Allow M2 for e.g. 110 × 0.9(0) and 110 × 0.9(0) × 1.25 or 125 ÷ 1.25 and (125 ÷ 1.25) ÷ 0.9(0) (may be in stages) M1 for 110 × 0.9(0) oe or 99 or 125 ÷ 1.25 oe or 100 si Allow ($)123(...) OR ($)123 or ($)124 from correct working Allow (€)111(...)
	(3)	

#3

Component 1: Foundation Tier	Mark	Comment
65 × 0.8(0) oe (£)52 52 × 1.2(0) oe (€)62.4(0) and online indicated	M1 A1 M1 A1	FT 'their 65 × 0.8(0)' Airport / Online £ 52 / 50 $ 65 / 62.5(0) € 62.4(0) / 60
Alternative method 1 *65 × 0.8(0) oe* *(£)52* *60 ÷ 1.2(0) oe* *(£)50 and online indicated*	*M1* *A1* *M1* *A1*	
Alternative method 2 *60 ÷ 1.2(0) oe* *(£)50* *50 ÷ 0.8(0) oe* *($)62.5(0) and online indicated*	*M1* *A1* *M1* *A1*	*FT 'their 60 ÷ 1.2(0)'*
	(4)	

#4

Component 1: Foundation Tier	Mark	Comment
240 × 2.5	M1	
600 (Canadian dollars)	A1	
162 000 ÷ 81	M1	
2000 (Canadian dollars)	A1	
2000 – 600 = 1400 (> 1000)	B1	FT 'their 2000' and 'their 600' provided M1 M1 awarded. Ignore units
Alternative method *240 × 2.5*	*M1*	
600 (Canadian dollars)	*A1*	
162 000 – 600 × 81	*M1*	*FT 'their 600'*
113 400	*A1*	*FT*
Correct complete comparison e.g. *113 400 > 81 000* *or 1400 (> 1000)*	*B1*	*FT 'their derived 113 400' provided M1 M1 awarded.* *Ignore units*
	(5)	

Exchange Rates: Calculator

Question	Maximum Mark	Mark Awarded
#1	5	
Total	5	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
825 × 6.27 = 5172.75 (R$) 5150 (R$)	M1 A1 A1	FT 'their 5172.75' rounded down to the nearest 50 provided M1 previously awarded Sight of 5150 (R$) with no incorrect working implies M1 A1 A1.
5150 ÷ 6.27	M1	Strict FT 'their 5150' provided a multiple of 50 If 5150 not seen award M1 and the previous A1 for 103 × 50 ÷ 6.27
= (£) 821.37 ISW	A1	FT Answer must be correct to the nearest penny. If final M0 A0, then award a further SC1 for (£)3.63 (left) or similar FT.
Alternative method *825 ÷ (50 ÷ 6.27)* *=103.4(5…)* *(103 × 50 =) 5150*	*M1* *A1* *A1*	*Award M1 A0 for 825 ÷ 7.97 = 103.5…* *FT 'their 103(….) × 50 ' provided 'their 103(….)' has been rounded down and M1 previously awarded*
5150 ÷ 6.27	*M1*	*Strict FT 'their 5150' provided a multiple of 50* *If 5150 not seen, award M1 and the previous A1 for 103 × 50 ÷ 6.27*
= (£) 821.37 ISW	*A1*	*FT Answer must be correct to the nearest penny.* *If final M0 A0, then award a further SC1 for (£)3.63 (left) or similar FT*
	(5)	

Bills: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	8	
Total	8	

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
(a) 432 ÷ 12	M1	May be awarded for a convincing build up method e.g. counting on in 12s
(£)36	A1	
(b) Sight of (30 × 20 =) 600(p) or (30 × 0.2(0) =) (£)6(.00)	B1	
Sight of 500 × 14 or 500 × 0.14 oe	M1	Accept 5 × 14; may be implied
7000(p) or (£)70(.00)	A1	CAO
(7000 + 600 =) 7600(p) or (70.00 + 6.00 =) (£)76(.00)	B1	FT 'their 500 × 14' + 'their derived 6' oe, providing M1 awarded and 30 × 20 oe attempted; may be implied in later work;
(VAT =) 380(p) or (£)3.8(0)	B1	FT 5% of 'their 7600' or 'their 76(.00)' providing that 'their 7600 or 76' is from an attempt to sum both the fixed charge and electricity for 30 days may be embedded e.g. B1 for 7600 + 380
7980(p) or (£)79.8(0) ISW	B1	FT providing previous B1 B1 awarded; if units are stated they must be correct; correct answer implies previous B1
	(8)	

Bills: Calculator

Question	Maximum Mark	Mark Awarded
#1	9	
Total	9	

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Marking Scheme

#1

Component 2: Foundation Tier	Mark	Comment
(a) 39.97 – 0.32 × 56 (= 22.05) ÷ 245 = (£) 0.09 or 9 (p)	 M2 m1 A1	Allow the marks for the equivalent in pence. M1 for 0.32 × 56 (= 17.92) FT from M2 only CAO. Answer line takes precedence. If units are given, they must be correct. Allow £0.09p but not 0.09p.
(b) 210 × 0.32 + 30 × 0.28 oe = (£)75.6(0) (Overall monthly cost including VAT =) 1.05 × 75.6(0) or 75.6(0) + 0.05 × 75.6(0) oe = (£) 79.38	 M2 A1 M1 A1	Allow the marks for the equivalent in pence. May be seen in stages. M1 for 210 × 0.32 (= 67.2) or 30 × 0.28 (= 8.4) CAO FT 'their total cost excluding VAT' FT Allow rounded or truncated answers to the nearest penny.
Alternative method *210 × 0.32 × 1.05 + 30 × 0.28 × 1.05* *= (£) 79.38*	 *M3* *A2*	 *M2 for 210 × 0.32 × 1.05 (= 70.56)* *or 30 × 0.28 × 1.05 (= 8.82)* *M1 for 210 × 0.32 (= 67.2)* *or 30 × 0.28 (= 8.4)* *CAO* *If M2 or M1 awarded, then award A1 for a correct evaluation of 'their 70.56' + 'their 8.82' provided the calculations 210 × 0.32 AND 30 × 0.28 are embedded in their answer.*
	(9)	

Product of Prime Factors: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	5	
Total	10	

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Marking Scheme

#1

	Mark	Comment
(b) Method to find prime factors with two correct prime factors seen before the second error	M1	Ignore 1's; the two prime factors may be correct or correct FT after one error
$2 \times 2 \times 2 \times 3 \times 7$ oe	A1	ISW

#2

Component 1: Foundation Tier	Mark	Comment
For a correct method that produces 2 prime factors from the set {2, 2, 3, 5} before the 2nd error.	M1	Must be a method that involves only division.
2, 2, 3, 5	A1	CAO for sight of the four correct factors (Ignore 1s)
$2^2 \times 3 \times 5$	B1	FT 'their primes' provided at least one index form used with at least a square. Do not FT non-primes. Allow $(2^2)(3)(5)$ and $2^2.3.5$ Do not allow $2^2,3,5$. Inclusion of 1 as a factor gets B0.
	(3)	

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) Method to find prime factors with two correct prime factors seen from the set {3, 3, 5, 5, 11} before the second error. 3, 3, 5, 5, 11 $3^2 \times 5^2 \times 11$	 M1 A1 B1	 Note: 2475 = 3 x 825 or 5 x 495 or 11 x 225 or 15 x 165 or 25 x 99 C.A.O. Ignore 1s. Primes may only be seen in factor tree. FT 'their derived primes' provided at least one index form used with at least one square. Do not FT non-primes. Allow $(3^2)(5^2)(11)$ and $3^2.5^2.11$ Do not allow $3^2,5^2,11$. Inclusion of 1 as a factor gets B0.
(b) $2^3 \times 5^2 \times 7^2$	 B2	 B1 for sight of • $8 \times 5^2 \times 7^2$ • $8 \times 25 \times 49$
	(5)	

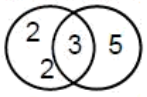
LCM / HCF: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
Total	5	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(soup =) 5 (water =) 4	B2	B1 for sight of 3×4 and 3×5 or equivalent or for (LCM =) 60 or for a correct Venn diagram of primes factors  or for 4 and 5 (values reversed) or for answers of $5n$ and $4n$ where n is an integer > 1
	(2)	

#2

	Mark	Comment
(c) Attempts to find a common factor of 168 and 120	S1	e.g. May list some of the factors of both 168 and 120 or draw a Venn diagram with the factors of 168 and 120 correctly positioned
Finds at least one common factor of 168 and 120 greater than 3	M1	FT 'their (a) and their (b)' 4, 6, 8, 12, 24
24	A1	CAO Mark final answer

LCM / HCF: Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
#3	5	
#4	5	
Total	16	

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Marking Scheme

#1

Component 2: Foundation Tier	Mark	Comment
(b) 10(:)00 (a.m.) Bus A: 8:30, 9:00, 9:30,10:00 Bus B: 8:24, 8:48, 9:12, 9:36,10:00	B3	B2 for correctly listing the times for bus A to 10:00 and to at least 9:12 without error for bus B B1 for correctly listing at least 3 times for bus A and 8:24, 8:48 for bus B
***Alternative Method 1**: Multiples of 30 & 24* *10(:)00 (a.m.)* *30, 60, 90, 120 (minutes)* *24, 48, 72, 96, 120 (minutes)*	*B3*	*B2 for an answer of 120 (minutes) or 2 hours OR for correctly listing to 120 for bus A and to at least 72 without error for bus B* *B1 for correctly listing at least 30, 60, 90 for bus A and 24, 48 for bus B*
***Alternative Method 2**: LCM of 30 and 24* *10(:)00 (a.m.)* *(Prime factors of 30) 2, 3, 5* *(Prime factors of 24) 2, 2, 2, 3*	*B3*	*B2 for an answer of 120 (minutes) or 2 hours OR sight of $2^3 \times 3 \times 5$ oe* *B1 for at least 2 correct prime factors for each of 30 and 24.*

#2

Component 2: Foundation Tier	Mark	Comment
(a) 18 (cm)	B3	Answer line takes precedence. Allow for (234 ÷ 13 =) 18 from (5x + 8x = 13x = 234 where x is the HCF) B2 for one of the following: • listing all the factors of 90 and 144 • 2 × 3 × 3 oe • two correct prime factor trees oe • 18 as an embedded answer in two calculations e.g. 90 ÷ 18 = 5 and 144 ÷ 18 = 8 where 18 is not written on the answer line or indicated as the answer. B1 for one of the following: • listing at least six factors of each number. • listing all the factors of 90. • listing all the factors of 144. • a correct prime factor tree for 90. • a correct prime factor tree for 144. • an answer of 6 or 9 • 13 selected as the answer from 234 ÷ 13 = 18 or 234 ÷ 18 = 13. Factors of 90: 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90 Factors of 144: 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72, 144 Prime factors of 90: 2, 3^2, 5 Prime factors of 144: 2^4, 3^2

#3

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
5 (drink multipacks) AND 4 (crisp multipacks)	B3	May be implied in working. e.g. 28 × 5 = 140 AND 35 × 4 = 140 B2 can be awarded for one of the following: • identifying the LCM = 140 e.g. 28, 56, 84, 112, 140 35, 70, 105, 140 • $2^2 \times 5 \times 7$ oe (from prime factors) • for 10 AND 8 (from a common multiple of 280) • for 15 AND 12 (from a common multiple of 420) B1 can be awarded for one of the following: • listing the multiples of 28 and 35 provided at least the first three are correct for each number. • sight of 5 × 7 AND 4 × 7 or $2^2 \times 7$ • for identifying a common multiple e.g. 280 • for a valid method of identifying a common multiple e.g. (28 × 35) ÷ 7
5 × 5.35 + 4 × 4.27 = (£)43.83	M1 A1	FT 'their 5' and 'their 4' provided at least B1 previously awarded and their total ≠ 28 × 35 or 980, and they have used the correct number of each multipack from their common multiple. CAO
	(5)	

#4

Eduqas Autumn 2018 **Component 2: Foundation Tier**	**Mark**	**Comment**
(b) (72 ÷ 24 =) 3 (bags of spoons) AND (72 ÷ 18 =) 4 (boxes of forks)	B3	Answers in the table take precedence over working B2 for any of the following: • (least amount to buy) 72 • the correct number of bags and boxes for 'their number of common multiples' found from making only 1 error in listing B1 for any of the following: • 24 = 6 × 4 and 18 = 6 × 3, or similar provided the factors are broken down sufficiently to be able to find the LCM • the correct number of bags and boxes for 'their number of common multiples' found from making 2 errors in listing
(3 × 19.95 and 4 × 15.55 =) (£) 59.85 AND (£) 62.2(0)	M1	FT use of 'their 3 bags of spoons' and 'their 4 boxes of forks' provided at least B1 previously awarded
= (£) 122.05	A1	CAO

Simple Interest: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
#3	4	
Total	10	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) ($\frac{5}{100}$ × 80 or $\frac{80}{10}$ ÷ 2 oe) = 4	B1	
(120 – 80) ÷ 4	M1	FT 'their 4' provided from a correct method for 5% of 80 with an arithmetical error.
10 months	A1	CAO Award M1 A0 for an embedded answer e.g. 4 x 10 = 40.

#2

Component 1: Foundation Tier	Mark	Comment
(£)4200 × $\frac{2}{100}$ × 5 oe	M1	
(£)420	A1	
(£)4620	B1	FT 4200 + 'their 420', provided M1 awarded If no marks award SC1 for sight of 84
	(3)	

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 12 (years)	B1	
(b) (4000 ÷ 5 =) 800 si or $\frac{20000 \times r \times 5}{100} = 4000$ si or $\frac{4000}{20000} \times 100 (= 20\%)$ si	B1	
4 (%)	B2	Implies 3 marks; allow if 4% is clearly their answer in the working and the answer line is blank B1 for sight of $\frac{\text{their } 800}{20000}$ or $1000 \times r = 4000$ oe or 20(%) ÷ 5 or stating 1% (of 20000) = 200 and attempting to build up to 'their 800'
	(4)	

Simple Interest: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
Total	2	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(b) 875 × 0.06 × 3 oe (£)157.5(0)	 M1 A1	May be seen in stages. ISW If no marks, award SC1 for a sight of (£)52.5(0) OR SC1 for a final answer of (£)1032.5(0)

Using Standard Units: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	5	
Total	5	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) Correct method to find the number of minutes e.g. • 35 + 8 • 5 + 30 + 8 • 60 – 17 43 (minutes)	M1 A1	
(b) (Ashby to Elderville =) 58 (minutes) (5 × 60 + 6) - 5 × 58 (= 306 – 290) OR 5 hours 6 minutes - 4 hours 50 minutes 16 (minutes)	 B1 M1 A1	 May be implied by sight of 4 hours 50 minutes OR 290 minutes. FT 'their 58 minutes'. FT 'their 58 minutes' provided their answer is greater than 0. If B1 M0 A0, award SC1 for a final answer of 74 (minutes).
	(5)	

Using Standard Units: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	2	
#4	4	
Total	8	

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Marking Scheme

#1

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a) (i) 3500 (grams)	B1	CAO

#2

Component 2: Foundation Tier	Mark	Comment
(b) (1740 mm) 1740 cm (174 cm) 174 m 17·4 km	B1	

#3

Component 2: Foundation Tier	Mark	Comment
(a) 33mins + 3hours + 13mins oe or 4hours – 14mins = 3 (hours) 46 (minutes)	M1 A1	Times may be split up differently If no marks, award SC1 for an answer of 226 (minutes)

#4

Component 2: Foundation Tier	Mark	Comment
(b) (4.25 × 2.5 ÷ 0.5 =) 21.25	B1	
35.83 – 21.25	M1	(= 14.58) FT 'their stated or derived 21.25' provided less than 35.83 and not 4.25
÷ 3	m1	FT
= (£)4.86	A1	CAO

Speed, Distance, Time: Calculator

Question	Maximum Mark	Mark Awarded
#1	6	
#2	4	
#3	5	
Total	15	

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Marking Scheme

#1

Component 2: Foundation Tier	Mark	Comment
(a) (speed =) 31.5 ÷ 1.75	M1	Allow 31.5 ÷ 1.45 (= 21.7…) or 31.5 ÷ 105 (= 0.3) for M1
18 (km/h)	A1	CAO
(b) 31.5 ÷ 15	M1	
2 (hours) 6 (mins) or 126 (mins) si	A2	A1 for 2.1 (hours) A0 for 2 hours 10 minutes or 130 minutes alone
6:06p.m. or 18:06	B1	Allow for 6:06 but not for 6:06 a.m. FT 'their 2 hours 6 minutes' or 'their 126 minutes' provided M1 awarded including answers of 6:10 p.m. or 18:10.
	(6)	

#2

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
Two correct conversions to enable a comparison. 50 knots = 58 mph OR 65 mph = 56 knots OR 50 knots = 92.6 km/h and 65 mph = 104 km/h	B2	Speeds may be in other units e.g. 'per 15 mins' B1 for one correct conversion seen Allow approximate values to be rounded or truncated to the nearest integer;
$104 \times \frac{15}{60}$ oe	M1	FT provided at least B1 awarded and the larger of 'their 65/0.625' oe and 'their 50 × 1.852' oe is selected e.g. 104 ÷ 4 (= 26)
Jet Ski and 26 km	A1	FT If no marks, award SC1 for the speedboat travels 12.5 (nautical miles) in 15 mins and the jet ski travels 16.25 (miles) in 15 mins
	(4)	

	mph	km/h	knots
Jet Ski	*65*	**104**	**56**
Speedboat	**58**	**92.6**	*50*

#3

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
4.8 ± 0.2	B1	May be implied by [230, 250] (miles)
4.8 × 50 = (240)	M1	FT 'their 4.8'
240 ÷ 5.75 or (240 ÷ 345) × 60	M2	FT 'their 240' Allow M1 for 'their 240' ÷ 'time' where 'their time' is an attempt at the time from 06:00 to 11:45 however expressed e.g 5.45
41.7(39…) to 42 (mph)	A1	FT provided the previous M2 awarded Answers for use of 4.6 to 5(cm) Length: 4.6 | 4.7 | 4.8 | 4.9 | 5.0 Speed: 40 | 40.86.. | 41.73.. | 42.60.. | 43.47..
	(5)	

Pressure, Force, Area: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	4	
#3	5	
Total	12	

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
(b) (Total force =) 1600 × 0.1 160 (N)	 M1 A1	
(c) Valid impact e.g. 'The force would be less'	 E1	 Ignore any extraneous comments e.g. 'The pressure would increase, and the force will be lower'.

#2

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 100 (cm^2)	B1	
(b) 8	B1	
(c) $8 \div 100$ or $\frac{8}{100}$	M1	or equivalent FT 'their 100' and 'their 8'
0.08	A1	FT 'their 100' and 'their 8'
	(4)	

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(Total Force =) 54 (newtons) si	B1	
(Total area = 3 × 6 =) 18 (cm^2) si	B2	B1 for 3 × 2 × 3 or 6(cm^2) si or for sight of 'their area of one foot' × 3
(Pressure =) 54 ÷ 18	M1	May be seen in stages e.g. 54 ÷ 3 ÷ 6 FT 'their 54' and 'their 18', providing at least 34 + 20 and 3 × 2 × 3 attempted NB 54 ÷ 6 ÷ 3 also implies B2 (Common answer 54 ÷ 6 = 9 earns B1 B1 M0 A0, 2 marks)
3 (N/cm^2)	A1	FT
	(5)	

Pressure, Force, Area: Calculator

Question	Maximum Mark	Mark Awarded
#1	4	
Total	4	

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Marking Scheme

#1

Component 2: Foundation Tier	Mark	
(a) $\frac{675}{45\times60}$ oe	M1	
0.25 (N/cm^2)	A1	
(b) 0.75 × (45 × 60) or 675 × 3	M1	FT 'their 2700' from (a) if necessary
2025 (N)	A1	
	(4)	

Density, Mass, Volume: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
Total	3	

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
700 × 7·5	M1	
5250 (g) or 5·25 kg	A1	CAO
No indicated or clearly implied	A1	FT 'their 700 × 7·5'.
Alternative method 1		
$\frac{5 \times 1000}{700}$	*M1*	
7·1(… cm^3)	*A1*	*CAO*
No indicated or clearly implied	*A1*	*FT 'their* $\frac{5 \times 1000}{700}$'
Alternative method 2		
$\frac{5 \times 1000}{7·5}$	*M1*	
666·6(… cm^3) or 666·7 (cm^3)	*A1*	*CAO*
No indicated or clearly implied	*A1*	*FT 'their* $\frac{5 \times 1000}{7·5}$'
	(3)	

Density, Mass, Volume: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	4	
#3	4	
Total	10	

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Marking Scheme

#1

	Mark	Comment
(Mass =) 2.4 × 13.4 32.16 (g)	M1 A1 (2)	CAO, accept 32.2(g) from correct working

#2

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
12 × 10.48 ÷ 19.32 (=6.509… g)	M2	M1 for 12 ÷ 19.32 (= 0.6211…)
12 – 6.5(….)	M1	Accept 6.5(…) – 12 FT 'their 12 × 10.48 ÷ 19.32' provided < 12 CAO, allowing also a negative difference
5.49(06….g) or 5.5 (g)	A1	
	(4)	

#3

Component 2: Foundation Tier	Mark	Comment
8.96 × 1540 ÷ 1000	M2	Answer space takes precedence M1 for 8.96 × 1540 (= 13798.4) Allow M1 for digits 896 × 1540 if incorrect mass unit conversion seen first
= 14 (kg)	A2	A1 for 13.7(98…) or 13.8 (kg) FT from M1 to award: A2 for an answer of 14000 Allow A2 for a correct FT answer with 14 as the only non-zero digits from a seen incorrect unit conversion A1 for an answer of 13798(.4) or 13800 Allow A1 for either of the following: • 13798(.4) seen and then spoiled e.g 13000 • a correct FT answer with 1379(84) or 138 as the only non-zero digits e.g. 138, 0.01379 from a seen incorrect unit conversion If no marks award SC1 for a calculation of: a number with only non-zero digits of 896 × a number with only non-zero digits of 154 e.g. 0.0896 × 1.54
	(4)	

Proportion: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
#4	3	
#5	3	
#6	3	
#7	3	
#8	3	
#9	4	
#10	5	
#11	6	
#12	8	
Total	46	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 51 ÷ 8.50 si	M1	May be implied by e.g. a build-up method adding 6 lots of 8.5(0) or 6 × 8.5(0) = 51(.00)
6	A1	

#2

Component 1: Foundation Tier	Mark	Comment
$2 \times \frac{2}{8} \times \frac{9}{3}$ or 2 ÷ 4 × 3 oe	M2	May be seen in stages. Candidates might work in minutes. M1 for one step, e.g. • 2 ÷ 4 (0·5 hours) • 2 × 3 (6 hours) oe
1·5 hours oe	A1	CAO
Alternative method 1 ***Pumps*** / ***Tanks*** / ***Time*** 9 / 8 / 2 ÷ 3 / / × 3 3 / 8 / 6 / ÷ 4 / ÷ 4 3 / 2 / 1·5	*M1* *M1* *A1*	*Method to find tanks and time for 3 pumps.* *Method to find time for 2 tanks. FT.* *CAO*
Alternative method 2 ***Pumps*** / ***Tanks*** / ***Time*** 9 / 8 / 2 ÷ 9 / / × 9 1 / 8 / 18 / ÷ 4 / ÷ 4 1 / 2 / 4·5 × 3 / / ÷ 3 3 / 2 / 1·5	*M1* *M1* *A1*	*Method to find tanks and time for 1 pump.* *Method to find tanks and time for 3 pumps. FT.* *CAO*
Alternative method 3 ***Pumps*** / ***Tanks*** / ***Time*** 9 / 8 / 2 / ÷ 8 / ÷ 8 9 / 1 / ¼ ÷ 3 / / × 3 3 / 1 / ¾ / × 2 / × 2 3 / 2 / 1·5	*M1* *M1* *A1*	*Method to find pumps and time for 1 tank.* *Method to find pumps and time for 2 tanks. FT.* *CAO*
	(3)	

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
36 $\times \frac{6}{9}$ oe $\times \frac{1}{2}$ 12 (minutes)	 M1 M1 A1	A table method altering all 3 values in the same ratio at the same time is M0 M marks may be seen in either order e.g. Printers 9, Booklets n, Time 24 **FT from M0 previously awarded** Must be from use of 36 e.g. if this calculation is performed first Printers 6, Booklets 0.5n, Time 18 CAO
Alternative method 1 *Printers first then booklets* ***Printers*** / ***Booklets*** / ***Time*** *6* / *n* / *36* × 1.5 / × 1.5 / *9* / *1.5n* / *36* / ÷ 3 / ÷ 3 *9* / *½ n* / *12*	 *M1* *M1* *A1*	*Note: the number of booklets may be an assumed number* FT 9 and 'their 36' CAO
Alternative method 2 *Booklets first then printers* ***Printers*** / ***Booklets*** / ***Time*** *6* / *n* / *36* ÷ 2 / ÷ 2 / *3* / *½ n* / *36* × 3 / / ÷ 3 *9* / *½ n* / *12*	 *M1* *M1* *A1*	*Note: the number of booklets may be an assumed number* FT *½ n* and 'their 3' CAO
Alternative method 3 *(using 1 printer)* ***Printers*** / ***Booklets*** / ***Time*** *6* / *n* / *36* ÷ 6 / / × 6 *1* / *n* / *216* × 9 / / ÷ 9 *9* / *n* / *24* / ÷ 2 / ÷ 2 *9* / *½ n* / *12*	 *M1* *M1* *A1*	*Note: the number of booklets may be an assumed number* *Two steps needed for M1* FT 9 and 'their 24' CAO
Alternative method 4 *(using 1 printer)* ***Printers*** / ***Booklets*** / ***Time*** *6* / *n* / *36* ÷ 6 / / × 6 *1* / *n* / *216* / ÷ 2 / ÷ 2 *1* / *½ n* / *108* × 9 / / ÷ 9 *9* / *½ n* / *12*	 *M1* *M1* *A1*	*Note: the number of booklets may be an assumed number* *Two steps needed for M1* FT *½ n* and 'their 108' CAO
	(3)	

#4

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) $5 \times 1.99 - 7.50$ or $5 \times (1.99 - 7.50 \div 5)$ si	M2	9.95 – 7.50 or 5(1.99 – 1.50); may be in stages May be in £ or p but must be consistent M1 for 5×1.99 oe; implied by e.g. 9.95 or for $(1.99 - 7.50 \div 5)$ oe; implied by e.g. 49p
(£) 2.45 or 245 (p)	A1	Allow £2.45p but not 2.45p If no marks award SC1 for $5 \times 2 - 7.50$ or for use of $5 \times 2 - k - 7.50$, where $0 < k \leq 0.1$ (but not 0.05); method must be seen for SC1 to be awarded

#5

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b)(i) Valid explanation e.g. 'There are more guests so the food should not last longer.' or 'He has halved instead of doubling.' or 'The food will last for less time if there are more people.'	E1	'It is impossible' without further explanation is E0 Allow e.g. 'If you divide one side you have to multiply the other,' Do not allow e.g. 'You have to multiply not divide.' (too vague)
(b)(ii) 4 (days)	B2	B1 for a correct intermediate step e.g. 10 guests and 12 days or for $\frac{20 \times 6}{30}$ oe si

#6

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) $\frac{95}{5} - 8 - 4$ or $\frac{95 - (8 \times 5 + 4 \times 5)}{5}$	M2	M1 for sight of $\frac{95}{5}$ (= 19) or for $95 - (8 \times 5 + 4 \times 5)$ (= 95 – 60 = 35)
7	A1	

#7

Component 1: Foundation Tier	Mark	Comment
2(h) or 120 (min) × 6 ÷ 3 ÷ 8 oe OR (8 machines 3000 ÷ 2 ÷ 6 × 8 =) 2000 erasers per hour or better ½ (hour) or 30 (mins)	M2 A1	Operations may be done in any order and in stages For complete correct method e.g. $\frac{2}{3} \div \frac{4}{3}$ or $\frac{2}{3} \times \frac{3}{4}$ M1 for partial correct method using time and using any two correct operations and no wrong operations OR M1 for 3000 ÷ 2 ÷ 6 × 8 or 3000 ÷ 120 ÷ 6 × 8 oe If units are given they must be correct
Alternative method *Complete method e.g.* *Machines / Erasers / Hours* *6 / 3000 / 2* *2 / 1000 / 2* *8 / 1000 / ½* *or* *Machines / Erasers / Hours* *6 / 3000 / 2* *8 / 4000 / 2* *8 / 1000 / ½* *½ (hour) or 30 (mins)*	*M2* *A1*	*Correct step(s) to 1000 and correct step(s) to 8 or e.g.* *Machines / Erasers / Hours* *6 / 3000 / 2* *1 / 500 / 2* *1 / 250 / 1* *and (time needed is to make) 1000 ÷ 8 = 125 (erasers per machine) oe* *M1 for finding 1 machine makes 250 erasers per hour or (time needed is to make) 1000 ÷ 8 = 125 (erasers per machine) or any one correct step* e.g. *Machines / Erasers / Hours* *6 / 3000 / 2* *1 / 500 / 2* *If units are given they must be correct*
	(3)	

#8

Component 1: Foundation Tier	Mark	Comment
$390 \times 2\frac{1}{3}$ or $2 \times 390 + \frac{390}{3}$ oe	M2	May be seen in stages. M1 for one of the following: • 390 × 2·3 (= 897) • 390 × 2·2(0) (= 858) • 390 × 140 (= 54 600)
910	A1	CAO
	(3)	

#9

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) (3 × 8) ÷ 2 oe, si	M1	May be in stages
12 (minutes)	A1	If no marks, award SC1 for sight of 24 (minutes)
(b) (31 – 5) ÷ 4 oe, si	M1	May be in stages; the division by 4 may be implied by repeated subtraction or addition but they must be trying to make whatever they think the answer to 31 – 5 is and must indicate that 2 is half of 4
6.5 (cm)	A1	Allow an embedded answer 4 × 6.5 + 5 as long as it is not contradicted
	(4)	

#10

GCSE (9-1) Mathematics Component 1: Foundation Tier	**Mark**	**Comment**
(Flour needed = 30 × 2·5 =) 75 (kg) OR (30 x 2500 =) 75000 (g)	B1	Accept equivalent work in pence.
(Number of small bags = $\frac{75}{1.5}$ =) 50	B1	FT 'their 75'
50 × 0.8 - 30 × 1·1 (= 40 – 33)	M2	Units must be consistent for M2. FT 'their 50' for M2 or M1 provided 'their 50' > 30 and B0 B1 previously awarded M1 for 50 × 0·8 (= 40)
(£)7	A1	CAO If M0 awarded, award a further SC1 for 30 × 1·1 (= 33).
	(5)	

#11

Component 1: Foundation Tier	Mark	Comment
(a) 3 × 75	M1	
225 (cm) oe	A1	If units given, they must be correct. If no marks, award M1 for an unsupported 2.25.
(b) 375 ÷ 75	M1	
5 (mm)	A1	
(5 ÷ 10 =) 0.5 (cm)	B1	FT 'their 5' ÷ 10. Correct answer implies 3 marks.
Alternative method: *(375 ÷ 10 =) 37.5 (cm)* *37.5 ÷ 75* *0.5 (cm)*	 *B1* *M1* *A1*	 *FT 'their 37.5'* *FT*
Alternative method: *1cm ≡ 750mm* *375 ÷ 750* *0.5 (cm)*	 *B1* *M1* *A1*	 *Units may be implied in further working.* *FT 'their 750'.* *FT*
(c) Valid explanation explaining the scale factor can be used for finding lengths or that the number of wheels remains the same e.g. 'Both the train and the model have 6 wheels'. 'The ratio is only used for scaling lengths (not numbers of things).'	E1	Accept other correct statements e.g. 'There will still be 6 wheels.' Ignore superfluous statements. e.g. 'It doesn't make sense to multiply wheels by length of 75'.
	(6)	

#12

Component 1: Foundation Tier	Mark	Comment
(a) 10800 ÷ 9 OR 10800 ÷ 48	M1	
1200 OR 225	A1	CAO
1200 ÷ 48 OR 225 ÷ 9	m1	FT 'their 1200' OR 'their 225'
25 (necklaces)	A1	FT
Alternative method *48 × 9* *432* *10800 ÷ 432* *25* (necklaces)	 *M1* *A1* *m1* *A1*	 *CAO* *FT 'their 432'* *FT*
(b) 246 × 54	M1	
13 284	A1	CAO
13 284 – 10 800	m1	FT 'their 246 × 54' providing greater than 10 800
(£)2484	A1	FT
	(8)	

Proportion: Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	4	
#3	4	
#4	4	
#5	5	
#6	6	
#7	7	
Total	33	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
58.5 – 1.8 × 12.5(0) (= 36)	M2	M1 for 1.8 × 12.5(0) (= 22.50)
36 ÷ 3.2 = (£)11.25 or 36 ÷ 11.25 = 3.2(m) or 3.2 × 11.25 = (£)36	A1	Convincing correct final step Dependent on M2
Alternative method 1 *1.8 × 12.5(0) + 3.2 × 11.25* *36 + 22.5(0) = (£)58.5(0)*	*M2* *A1*	*M1 for either 1.8 × 12.5(0) (=22.50) or for 3.2 × 11.25 (= 36)* *Convincing correct final step*
Alternative method 2 *1.8 x 12.5 + 3.2y = 58.50* *3.2y = 58.50 - 22.5. or 3.2y = 36* *(y) 36 ÷ 3.2 = (£) 11.25*	*M1* *M1* *A1*	*Allow other notation*
	(3)	

#2

Component 2: Foundation Tier	Mark	Comment
6.23 - 1.32 × 3.5 (=1.61) ÷ 2.3 = (£)0.7(0) or 70(p)	M2 m1 A1	Allow the marks for the equivalent in pence. M1 for 1.32 × 3.5 (=4.62) FT from M2 only CAO. If units are given, they must be correct. If no marks, award SC1 for an answer of (£) 2.13(…) from (6.23 - 1.32) ÷ 2.3
	(4)	

#3

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
(a) 26 x 7.5 or 13 x 15 (195) or 13 x ¼ or 26/8 or equivalent 3 (hours) 15 (minutes)	M1 A1	May be seen in stages. An answer of 3.25 would imply M1.
(b) Assumption, e.g. 'each shirt takes the same time to iron', 'all shirts same size/type/etc' or 'doesn't take a break' or equivalent.	E1	
(c) Impact e.g. 'the time would change' or equivalent.	E1 (4)	Note that the time could increase or decrease. The impact must match the assumption. Acceptable responses include: 'It could increase the time taken' 'It could decrease the time taken' 'The time could increase or decrease' 'The time would increase or decrease' The word 'time' may not be seen.

#4

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a) 80(g) ÷ 32 x 5 = 12.5(g)	M1 A1	The method may be seen in steps.
(b) (i) Assumption, e.g. 'All the pieces are the same size' 'the fat is evenly distributed' (ii) Impact, which must be consistent with their assumption. e.g. 'If the pieces are not the same size, there could be more (or less) fat'	E1 E1 (4)	

#5

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(b) 51 × 1.35 (£)68.85	 M1 A1	
130.29 – 68.85 (= 61.44)	M1	or equivalent in pence; FT 'their 51 × 1.35'
÷ 48	m1	
(£) 1.28	A1	CAO

#6

Component 2: Foundation Tier	Mark	Comment
(a) **1440** (g of porridge oats) **750** (g of butter) **600** (g of brown sugar) **12** (table spoons of syrup)	B2	B1 for at least two values correct
(b) 1.75 kg = 1750 g or 125 g = 0.125 kg 1750 ÷ 125 or 1.75(0) ÷ 0.125 = 14 (batches of 12 flapjacks)	B1 M1 A1	May be implied in working Allow M1 for 1.75 ÷ 125 or similar from incorrect unit conversion e.g. 17.5 ÷ 125 CAO
(c) A convincing explanation eg. ' 3 more flapjacks, 3 is 25% of 12' '25% of 12 is 3 and 3 more flapjacks are needed to make 15' '3 out of 12 is 25%' '15 is 125% of 12'	E1	Do not accept 12 + 3 without further explanation. Allow '25% is 3 (flapjacks)' '12/4 = 3'
	(6)	

#7

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
(a) Convincing working e.g. 1½lb = 16 + 8 = 24 oz 24 x 28 = 672 (g)	B2	Award B1 for sight of 24 or for 'their 16 + 8' x 28. The method could be seen in reverse, starting with 672(g) and ending with 1.5(lb).
(b) 672 ÷ 6 x 8 or equivalent = 896 (g)	M1 A1	M1 for a correct imperial answer (2lb or 32oz) May be seen in stages.
(c) 728 ÷ 28 (= 26oz) 26 ÷ 13 x 6 = 12 (people)	M1 M1 A1 (7)	Or equivalent. FT 'their 26' FT 'their 26' *Alternative method: 13 x 28 (= 364)* *M1* *728 ÷ 364 x6 or 2 x 6* *M1* *=12* *A1*

Ratio: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	2	
#3	3	
#4	3	
#5	3	
#6	3	
#7	3	
#8	3	
#9	4	
#10	4	
#11	4	
#12	4	
#13	5	
#14	5	
#15	5	
#16	6	
#17	6	

#18	6
#19	7
#20	7
Total	84

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
(c) 1:1 oe	B1	Must be integers

#2

Component 1: Foundation Tier	Mark	Comment
$2 \times 330 \div (1 + 2 + 7)$ 66 (ml)	M1 A1	May be seen in stages. Full method required.
	(2)	

#3

Component 1: Foundation Tier	Mark	Comment
(a) $9.6 \div 12$ (= 0.8) $0.8 \div 8 \times 3$ 0.3 (kg) or 300g	 M1 M1 A1	 FT 'their 0.8' including place value error from conversion of kg to g CAO

#4

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 1 : 4 : 2	B2	B1 for sight of 4 : 16 : 8 or 2 : 8 : 4 oe
(b) Correct explanation e.g. 'she hasn't considered one length was in m and the other length was in cm'.	E1	Accept 'it should be 20 : 3'. Allow • 'they have different units' • 'they should be in the same units' • 'it should be 100 : 15' • 'it should be 1 : 0·15' • 'she has not converted from metres to cm' • '1 m = 100 cm' • '2 m = 200 cm' • 'cm and m are different things' • 'the conversion between m and cm is not correct' Accept equivalent wording. Do not allow 'she has just simplified the numbers'. Do not ignore contradictory comments or incorrect working.
	(3)	

#5

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(d)(i) 12 : 1 or equivalent	B1	e.g. 60 : 5
(d)(ii) $(60 \div 12) \times 3$ or equivalent 15	M1 A1	May be seen in stages

#6

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b)(ii) $360 \div (4 + 1)$	M1	
72	A1	Ignore any units if stated; may be in ratio 288 : 72
$(72 \div 9 =)$ 8 (hours)	A1	CAO

#7

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
*(a) $\frac{7}{12}$	B1	Allow for any equivalent fraction e.g. $\frac{84}{144}$
(b) $\frac{300}{12} \times 2$ oe	M1	FT 'their 2 + 3 + 7' from part (a); allow recovery of 12 here even if a different denominator in (a)
50 (ml)	A1	FT 600 ÷ (their 2 + 3 + 7)
	(3)	

#8

Component 1: Foundation Tier	Mark	Comment
(a) $\frac{7}{15}$	B1	Accept equivalent fractions.
(b) $\frac{60}{15} \times 3$ or $\frac{60}{15} \times 5$ or $\frac{60}{15} \times 7$ si	M1	FT 'their 3 + 5 + 7' from (a).
12 (cm), 20 (cm), 28 (cm)	A1	FT. Two correct answers imply M1. May be seen in any order.
	(3)	

#9

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
$40 \div (1 + 3 + 4)$ or (egg, cheese, meat =) 5, 15, 20	M1	Allow for $8 \times 5 = 40$ but not for $40 \div 5 = 8$ 5, 15, 20 may be in a ratio or may be implied by e.g. tallying
$0.2 \times 5 + 0.1 \times 3 \times 5 + 0.25 \times 4 \times 5$ si (= 1 + 1.5 + 5) oe	M2	FT $40 \div$ 'their $(1 + 3 + 4)$'; may be in stages; sight of 1, 1.5 and 5 followed by an answer of 7 or 8 implies M2 M1 for 2 terms out of 3 correct in the sum si or for (egg, cheese, meat =) 1, 1.5, 5
7.5 or $7\frac{1}{2}$	A1	CAO; Allow $\frac{15}{2}$; ignore rounding to e.g. 7 or 8 once correct answer seen; *an answer of 32.5 is a misinterpretation not a misread of the figures*
Alternative method		
$0.2 \times 40 \times 1 + 0.1 \times 40 \times 3 + 0.25 \times 40 \times 4$ (= 8 + 12 + 40 = 60) oe	*M2*	*May be in stages;* *M1 for sight of 8, 12 and 40*
$\div (1 + 3 + 4)$	*M1*	*FT 'their 8 + 12 + 40' ;*
7.5 or $7\frac{1}{2}$	*A1*	*CAO; Allow $\frac{15}{2}$; ignore rounding to e.g. 7 or 8* *once correct answer seen;* *final answer of e.g. $\frac{60}{8}$ is A0* *an answer of 32.5 is a misinterpretation not a misread of the figures*
	(4)	

#10

GCSE (9-1) Mathematics Component 1: Foundation Tier	**Mark**	**Comment**
(a) $\frac{560}{5+3} \times 5 + \frac{560}{5+3} \times 3 \times 1.5$ oe or $560 + \frac{560}{5+3} \times 3 \times 0.5$	M3	May be in steps; M2 for sight of $\frac{560}{5+3} \times 5\ (\times 1)$ (= 70 × 5 = 350) or $\frac{560}{5+3} \times 3 \times 1.5$ (= 210 × 1.5 = 315) or $\frac{560}{5+3} \times 3 \times 0.5$ (= 210 × 0.5 = 105) OR for $560 \div (5 + 3)$ (= 560 ÷ 8 = 70) **and** $5 + 3 \times 1.5(0)$ (5 + 4.50 =9.50) or M1 for $560 \div (5 + 3)$ (= 560 ÷ 8 = 70)
(£) 665	A1	CAO

#11

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 10 : 3	B2	Mark final answer B1 for any correct **simplified** ratio not in simplest form e.g. 40 : 12; may be in working space If no marks, award SC1 for a final answer 3 : 10
(b) 152 CAO	B2	Mark final answer B1 for 19 × (24 ÷ 3) oe, si or for finding 152 : 24 from 19 : 3 or for 152 seen and then spoiled by e.g. adding or subtracting 80 or 24 If no marks, award SC1 for final answer 72

#12

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) $\frac{11}{21}$	B1	
(b) 5 parts = (£)45 OR 1 part = (£)9 OR 11 parts – 2x3 parts = 45 oe OR $^{11}/_{21} - 45 = {}^{6}/_{21}$ 45 ÷ 5 x 7 oe OR 9 x 7 (£)63	B1 M1 A1	May be implied by M1 FT an arithmetic error in 'their 11 – 2x3' for M1 A0
	(4)	

#13

Component 1: Foundation Tier	Mark	Comment
(a) 3:2	B2	B1 for any simplified version of 72:48 e.g. 36:24. If no marks, allow B1 for 2:3
(b) $\frac{48}{72+48}$ (× 100) OR $\frac{2}{2+3}$ (× 100) 40(%)	M1 A2	FT 'their ratio' from (a) of equivalent difficulty A1 for appropriate sight of $\frac{8}{20}$ or $\frac{4}{10}$ or $\frac{2}{5}$. Note: If FT 'their ratio' from (a) accept their percentage rounded or truncated for A2.
	(5)	

#14

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
		Mark whichever method is to the candidate's advantage
Attempts to find a common factor of at least two of 140, 56 and 280	S1	Allow slips if the intention is clear. e.g. May list some of the factors of e.g. both 140 and 56 or 280, or all list factors of all 3 values or calculations, using factors, such as 140 ÷ 14 = … **and** 56 ÷ 14 = … or 28 × 5 = 140 **and** 28 × 2 = 56 or 280 ÷ 56 = 5 or 280 ÷ 140 = 2 or attempt to find the prime factorisation of two of the numbers $140 = 2^2 \times 5 \times 7$, $56 = 2^3 \times 7$, $280 = 2^3 \times 5 \times 7$ or draw a Venn diagram with the prime factors of any two numbers correctly positioned
Finds at least one common factor, greater than 1, of all three numbers	M1	2, 4, 7, 14, 28; may be embedded in calculations e.g. 28 × 5 = 140, 28 × 2 = 56, 28 × 10 = 280
28 (bags)	A1	CAO
Uses a common factor that is greater than 4 to find the number of each item	M1	NB 7: 20, 8, 40 14: 10, 4, 20
5 (vouchers), 2 (pencils), 10 (sweets)	A1	CAO
Alternative method: *Forms the ratio 140 : 56 : 280 and attempts to simplify*	*S1*	*Values in ratio could be in any order.* *e.g. finds a simplified form with 2 values correct*
Finds a simplified form of 140 : 56 : 280	*M1*	*e.g. 70 : 28: 140*
(5 : 2 : 10 therefore) 5 (vouchers), 2 (pencils), 10 (sweets)	*A1*	*CAO*
Finds 140 ÷ 5 or 56 ÷ 2 or 280 ÷ 10	*M1*	*FT 20: 8: 40 or 10: 4: 20 only; may be in stages*
28 (bags)	*A1*	*CAO*
	(5)	

#15

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 36 ÷ (1 + 8) 4 (marbles)	M1 A1	 If no marks, award SC1 for sight of either: • (total number of marbles =) 36 • (number of Beatrice's marbles =) 32
(b) (Chloe =) 30 ÷ 2 × 3 OR 30 ÷ 2 × 5 - 30 AND (Davina =) 30 ÷ 2 × 5 OR 30 ÷ 2 × 3 + 30 Chloe gets 45 marbles Davina gets 75 marbles	M2 A1	M1 for either: • (Chloe =) 30 ÷ 2 × 3 • (Davina =) 30 ÷ 2 × 5 CAO If no marks, award SC1 for clear indication that 2 parts = 30 marbles or 1 part = 15 marbles e.g. 30/2 = 15.
	(5)	

#16

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b)(i) $25 + \frac{25}{5} \times 3$ (= 25 + 15) or $\frac{25}{5} \times 8$ (= 5 × 8) 40 (hours)	M1 A1	 If no marks awarded, allow SC1 for sight of 15 (hours)
(b)(ii) 156 ÷ 15 (£) 10.4(0)	M1 A1	FT 'their (40 – 25)' , provided 'their 15' ≥ 11 FT ; any FT values must be rounded or truncated to 2 dp
(b)(iii) $\frac{175}{25} - 1$ or $\frac{175 - 25}{25}$ (£) 6	M1 A1	May be in steps

#17

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 5:1	B2	B1 for one of the following: • 1500:300 OR 15:3 oe • 1:5 from clear, correct unit conversion If no marks, award SC1 for 1:2 (from 150:300 or 15:30)
(b)(i) $\frac{7}{15}$	B1	
(b)(ii) 560 ÷ (5+3) × 7 OR 560 – 560 ÷ (5+3) 490 (g)	 M2 A1	May be seen in stages M1 for sight of 560 ÷ (5 + 3) or 70 CAO
	(6)	

#18

Component 1: Foundation Tier	Mark	Comment
Finds the number of slabs for the length and width of the pond	S1	May be implied by 5 slabs or 7 slabs correct
(Number of slabs = 5 + 7 + 5 + 7 + 4 =) 28	B1	
28 ÷ 4 × 3 OR 28 ÷ 4 (× 1)	M1	FT 'their 28' if a multiple of 4.
21 grey and 7 white si	A1	CAO
5 × 21 + 6 × 7	m1	FT 'their 21' and 'their 7'
(£)147	A1	CAO Award S1 B0 M1 A0 m1 A0 SC1 for a final answer of £126.
	(6)	

#19

	Mark	Comment
(a) 7 : 10	B2	B1 for any simplified ratio not in simplest form seen e.g. 21 : 30 If no marks then SC1 for an answer of 10 : 7
(b) 1 + 4 + 3 (= 8) si (96 ÷ 8) × 3 oe (£) 36	M1 M1 A1	Allow for sight of 1 : 4 : 3 oe or x , $4x$, $3x$ FT 'their 1 + 4 + 3' e.g. division by 7 is M0 unless it comes from 1 + 4 + 3 = 7 CAO
(c) (54 +) $\frac{54}{10}+\frac{54}{10}\div 2$ oe (£) 62.1(0)	M1 A1	e.g. (54 +) 5.4(0) + 2.7(0) or (54 +) 8.1(0)
	(7)	

#20

Component 1: Foundation Tier	Mark	Comment
(a)(i) 9 : 7	B2	B1 for sight of any simplified ratio not in simplest form or for 7 : 9; allow non-integer values for B1 NB 45000 : 35000 is B0
(a)(ii) 21 000 ÷ 7 × 9 – 21 000 (= 27000 – 21000) oe si or 21 000 ÷ 7 × (9 – 7) (= 3000 × 2) oe si (£)6000	M2 A1	For M2 or M1, allow 45000 and 35000 used correctly or any correct ratio whether in simplest form or not OR FT 'their 9 : 7' , providing B1 awarded in (a)(i) M1 for 21 000 ÷ 7 × 9 (= 27 000) oe or 21 000 ÷ 7 × 16 – 21000 (= 27 000) oe or 21 000 ÷ 7 × 16 (= 48 000) oe CAO
(b) 21 000 + (35 000 ÷ 10) × 3 oe, si (£)31 500	M1 A1	(= 21 000 + 10 500); may be in stages
	(7)	

Ratio: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	3	
#3	3	
#4	3	
#5	3	
#6	3	
#7	4	
#8	4	
#9	5	
#10	6	
Total	36	

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Marking Scheme

#1

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a) 1 : 1 : 3 in any order	B1	Allow multiples of this ratio
(b) 3/5 or equivalent	B1 (2)	FT 'their 3' 'their 1 + 1 + 3'

#2

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
(a) (i) 3500 (grams)	B1	CAO
(a) (ii) 3500 : 475 or 3.5 : 0.475 = 140 : 19	M1 A1	For conversion to same units on both sides of the ratio. FT 'their 3500' for M1. CAO

#3

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
(65 + 14 + 9) × 27 ÷ 9 (=88 × 3) 264 (kg) Conclusion that it is not possible as 264 > 250, e.g. 'No as 264kg is greater than ¼ tonne'	M1 A1 E1 (3)	FT provided M1 awarded for an appropriate conclusion. Do not accept ¼ tonne as any amount other than correctly giving 250 kg, however it is not essential to state this conversion.

#4

Component 2: Foundation Tier	Mark	Comment
(a) 2 : 6 : 3	B2	Must be in the correct order. B1 for any correct but un-simplified ratio e.g.1 : 3 : 1.5, 2x : 6x : 3x, 10 ; 30 :15
(b) $\frac{3}{11}$ oe	B1	FT 'their 3' and 'their 11' providing the numerator and denominator in the final fraction are integers FT allowed from non-numeric answers to (a) e.g. 6x : 2x : x leading to $\frac{1}{9}$
	(3)	

#5

Eduqas Autumn 2019 C2 Foundation Tier		Comments
(a) Flour 70 × 102 ÷ 17 OR Sugar 10 × 102 ÷ 17 Flour 420 (g) Sugar 60 (g)	M1 A1 A1	 If answer reversed, allow A1 only

#6

Component 2: Foundation Tier	Mark	Comment
(a)(i) $\frac{5}{12}$	B1	ISW
(a)(ii) $\frac{18072}{12} \times 7$ (£)10 542	M1 A1	FT 'their 2 + 3 + 7' from (a)(i) provided > 10

#7

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(a) 366 ÷ (1+3) × 3 (£)274.5(0)	M1 A1	 If M0 award SC1 for sight of (£)91.5(0)
(b) 3 : 5	B2	B1 for an answer of 6 : 10 oe SC1 for an answer of 3 : 2, (from halving not doubling and obtaining 6 : 4) or a final answer of 5 : 3
	(4)	

#8

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
(a) 390 ÷ (1+5) x 5 or 390 - $\frac{390}{1+5}$ = 325 (ml)	M1 A1	 Allow M1 A1 for 65:325
(b) 4 : 9	B2	B1 for sight of 120:270 or equivalent ratio that is not fully simplified. If no marks, award SC1 for an answer of 4 : 13 (from 120 : 390)
	(4)	

#9

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
(a)(i) 50.4 (cm)	B1	
(a)(ii) No indicated and valid explanation e.g. 'He has incorrectly changed 1.53 m to cm' or 'He should have used 153 ÷ 18' or 'The 85 should be mm.'	E1	Allow No indicated and e.g. 'The answer should be 8.5 cm' or '1.53 ÷ 18 = 0.085m'
(b)(i) 2 : 1 oe	B1	
(b)(ii) (114 ÷ 3) × 2 oe 76 (hours)	M1 A1	FT 'their 2 : 1', in the form $a : b$ where $a \neq b$ and which cannot be simplified to 1 : .... CAO If no marks, award SC1 for an answer of 38 (hours; from use of 1 : 2 oe)
	(5)	

#10

Eduqas Autumn 2019 C2 Foundation Tier		**Comments**
(a) 2.5	B1	
(b) 396 (litres)	B2	B1 for 264 x 99 ÷ 66 or 264 + ½ of 264 or equivalent
(c) 5 + 3 × 5 + 3 × 5 ÷ 2 27.5 × 2 × 4.95 (£) 272.25	M1 M1 A1 (6)	May be implied by sight of 27.5 (litres) FT 'their derived 27.5' CAO If no marks, award SC1 for sight of 15 and 7.5, or SC2 for 2 x 4.95 (9.90) x 5 (=49.50) and 9.90 x 15 (=148.50) and 9.90 x 7.5 (=74.25)

Growth / Decay: Calculator

Question	Maximum Mark	Mark Awarded
#1	3	
#2	3	
#3	4	
#4	4	
#5	5	
#6	5	
#7	6	
#8	7	
Total	37	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	Comment
130×1.06^{10}	M2	May be seen in stages; M1 for sight of 130×1.06 (= 137.8)
(£)232.81	A1	CAO An answer of (£)208 (simple interest) from use of $130 \times 0.06 \times 10 + 130$ is awarded M1 A0
	(3)	

#2

	Mark	Comment
2500×0.84^n with any value of n from n=1 to n=10 or equivalent	M1	$(2500 \times 0.84 = £2100)$ $(2500 \times 0.84^2 = £1764)$ $(2500 \times 0.84^3 = £1481.76)$
2500×0.84^n with a second value of n from n=1 to n=10 or n = 6 or equivalent leading to an answer closer to £1000 than the previous trial	m1	$(2500 \times 0.84^4 = £1244.6784)$ $(2500 \times 0.84^5 = £1045.529...)$ $(2500 \times 0.84^6 = £878.245...)$ $(2500 \times 0.84^7 = £737.725...)$ $(2500 \times 0.84^8 = £619.689...)$ $(2500 \times 0.84^9 = £520.539...)$ $(2500 \times 0.84^{10} = £437.253...)$
6 (years)	A1	CAO If no working, award SC2 for an answer of 6 (years)
	(3)	

#3

Component 2: Foundation Tier	Mark	Comment
$12\,250 \times (1 - 0{\cdot}18) \times (1 - 0.15)^8$	M2	M1 for $12\,250 \times (1 - 0{\cdot}18)$ (= 10 045) OR $12\,250 \times (1 - 0{\cdot}15)^8$ (= 3338.0…) OR …..$\times (1 - 0{\cdot}18) \times (1 - 0{\cdot}15)^8$
An answer in the range (£)2737.15 to (£)2737.20	A1	Allow an answer of (£)2737 from correct working *(Year 8 value 3220.18 to 3220.20)*
(£)9512.80 to (£)9512.85 or (£)9513 *Allow answers not rounded or truncated*	B1	FT 'their car value' provided M2 awarded. Award M1 SC2 for an answer of (£)9923 or (£)9923.40 or (£)9923.41 OR M1 SC1 for an answer of (£)2326.59 from use of $12\,250 \times (1 - 0{\cdot}18) \times (1 - 0.15)^9$
	(4)	

#4

Component 2: Foundation Tier	Mark	Comment
$5000 \times 1.02^5 \times 1.013^4$ oe, si	M3	Method for M3 or M2 may be seen in stages M2 for use of $\times 1.02^5$ or $\times 1.013^4$ oe Note: $5000 \times 1.02^5 = 5520.40\ldots$ and $5000 \times 1.013^4 = 5265.11\ldots$ M1 for use of $\times 1.02$ or $\times 1.013$ oe Note: 5000×1.02 (= 5100) or 5000×1.013 (= 5065)
(£) 5813.11... or (£)5813 or (£)5813.10	A1	CAO A1 only from fully correct working.
	(4)	

#5

GCSE (9-1) Mathematics Component 2: Foundation Tier	Mark	
(a) 4×0.55^7 400×0.55^7 = 0.06089… or 0.0609 (m) 6.089….. or 6.09 (cm)	M2 A1	M1 for 4×0.55^n or 400×0.55^n where $1 \leq n < 9$ CAO. If units are given, they must be correct. Mark final answer. Accept 0.061 or 0.06 (m) , 6.1 or 6 (cm) from correct working **provided no inaccurate working seen.** If no marks, award SC1 for an answer of 0.0149.. or 0.015 (m) or 1.49.. or 1.5 (cm) (from 4×0.45^7 or 400×0.45^7)
(b)(i) A correct assumption e.g. 'The surface it bounces on is the same on each bounce.' 'The ball bounces on level ground.' 'That the 55% is correct for <u>all</u> bounces.' 'No energy is lost elsewhere.' 'There is no wind.' 'There was nothing in the way.'	E1	Allow e.g. 'It is flat.' – implies the surface 'No other forces acting on the ball.' 'Nothing interfered with the bouncing.' Do not allow e.g. 'It was dropped without force. ' 'The ball is dropped with the same force every time.'
(b)(ii) A correct effect of the assumption e.g. 'There will be no change to my answer.'	E1	If no valid assumption is made, then this mark cannot be awarded. Cannot award E0 E1. The effect must follow their assumption.
	(5)	

#6

Component 2: Foundation Tier	Mark	Comment
10 000 ÷ 1250 (= 8)	M1	
35 950 × (1 – 0.18)^8	M2	FT for possible M2 for sight of one of: • 35 950 × (1 – 0.18)$^{\text{'their 10 000 ÷ 1250'}}$ • 35 950 × 0.82$^{\text{'their 10 000 ÷ 1250'}}$ May be seen in stages but the method must be seen and fully correct e.g. 8 stages with × 0.82 seen at each stage. M1 for sight of 35 950 × (1 – 0.18) oe complete and correct method or sight of 29 479
7348.69 or 7348.68(...) or 7348.7 or 7349 or 7350	A1	CAO A1 only from fully correct working.
(35 950 – 7348.69 =)(£) 28 601.31	B1	If M1 M2 A1, accept answer in range 28 600 to 28 602; FT 'their 7348.69' provided M1 M2 awarded If M1 M2 A1 B0 awarded, then award further SC1 for an answer of 79(.5…)% or 80% decrease from $\left(\frac{35950 - 7348.69}{35950} \times 100 =\right)$
	(5)	

#7

<table>
<tr><th>Component 2: Foundation Tier</th><th>Mark</th><th>Comment</th></tr>
<tr><td>(a)

$8000 \times (1 - 0.3)^4$ oe

= 1920.8 or 1921

8000 – 1920.8 = 6079.2 therefore 6079 (£10 vouchers)

or 8000 – 1921 = 6079 (£10 vouchers)</td><td>M2

A1

B1</td><td>M1 for $8000 \times (1 - 0.3)^n$ oe when $1 \leq n < 4$
$8000 \times (1 - 0.3)$ (= 5600)

CAO</td></tr>
<tr><td><u>Alternative method</u>

A full method for the number of vouchers sent for the 4 weeks.
<table><tr><td></td><td>Vouchers sent</td><td>Houses left</td></tr><tr><td>Week1</td><td>8000 × 0.3 = 2400</td><td>8000 – 2400 = 5600</td></tr><tr><td>Week2</td><td>5600 × 0.3 = 1680</td><td>5600 – 1680 = 3920</td></tr><tr><td>Week3</td><td>3920 × 0.3 = 1176</td><td>3920 – 1176 = 2744</td></tr><tr><td>Week4</td><td>2744 × 0.3 = 823(.2)</td><td></td></tr></table>
2400 + 1680 + 1176 + 823.2 or 2400 + 1680 + 1176 + 823

= 6079.2 therefore 6079 (£10 vouchers)</td><td>M2

m1

A1</td><td>M1 for 8000 – 8000 × 0.3 (= 5600) oe

FT provided M2 awarded

CAO</td></tr>
<tr><td>(b)(i)

A valid assumption that John made e.g.

‘Every house that was sent a voucher used the voucher.’
‘Every house that was sent the voucher received the voucher.’
‘Every house that received the voucher used the voucher by the end of the four weeks.’
‘Every house that received the voucher uses that supermarket.’
‘They had time to use the voucher.’</td><td>E1</td><td>Allow e.g.

‘None got lost in the post.’
‘They use that supermarket.’
‘That <u>every</u> house will use their voucher.’

Do not allow e.g.
‘6079 vouchers would be used.’
‘The vouchers would encourage people to go to the supermarket.’</td></tr>
<tr><td>(b)(ii)

A valid effect of their assumption e.g.

‘Less than 6079 vouchers would have been used.’</td><td>E1</td><td>If no valid assumption is made, then this mark cannot be awarded. Cannot award E0 E1.

Allow e.g.
‘Less vouchers used.’</td></tr>
<tr><td></td><td>(6)</td><td></td></tr>
</table>

#8

Component 2: Foundation Tier	Mark	
(a) 3000×1.04^5	M1	Or equivalent full and complete method
= (£)3649.95(87..) or (£)3649.96 or (£)3650	A1	
$\frac{3649.96-3000}{3000}(\times 100)$ oe AND $\frac{3\times190}{3000}(\times 100)$oe OR $\frac{3649.96-3\times190}{3000}$ (x 100)	M2	FT 'their 3649.96' provided M1 previously awarded M1 for either $\frac{3649.96-3000}{3000}(\times 100)$ or $\frac{3\times190}{3000}(\times 100)$ providing M1 previously awarded
A indicated AND 2.7(%) or 2.66...(%)	A1	FT. Allow 2(%) or 2.6(%) or 3(%).
Valid assumption e.g. 'Account A interest rate stays the same' 'Account A interest rate **does not** vary' 'Account A interest rate **does not** go up or down'	E1	Do not allow 'Account A, interest rate can vary' 'Account A interest rate is not guaranteed'
Alternative method *$1.04^5 \times 100 - 100$ oe*	*M2*	*= 1.2166.... × 100 – 100* *M1 for 1.04^5*
21.7(%) or 21.66....(%)	*A1*	Allow 21(%) or 21.6(%) or 22(%)
(3 × 190) ÷ 3000 (× 100) (=19%)	*M1*	*FT providing M1 previously awarded*
A indicated AND 2.7(%) or 2.66...(%)	*A1*	*FT providing M1 M1 previously awarded* Allow 2(%) or 2.6(%) or 3(%)
Valid assumption e.g. *'Account A interest rate stays the same'* *'Account A interest rate **does not** vary'* *'Account A interest rate **does not** go up or down'*	*E1*	*Do not allow* *'Account A - interest rate can vary'* *'Account A interest rate is not guaranteed'*
(b) Valid impact based on assumption e.g. 'Even if the interest rate went up, the answer would still be account A but the difference would be more.' 'If the interest rate went down, account A may not have the greater increase.' 'If the interest rate doesn't stay the same, then Account A could have even more money than B or less than B'	E1	If no valid assumption is made then this mark cannot be awarded. E0E1 not allowed. Allow 'the answer could be different'. Do not allow 'the answer could be wrong'.
	(7)	

Standard Form: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
#2	2	
#3	3	
#4	4	
#5	4	
#6	5	
#7	6	
Total	26	

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Marking Scheme

#1

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b) 64	B2	Not from wrong working B1 for 4^3 or $4 \times 4 \times 4$ or 4^{10+-7} oe, si NB e.g. $4^3 \times 4^3$ is B0

#2

Component 1: Foundation Tier	Mark	Comment
$4(\cdot 0) \times 10^3$	B2	B1 for: • sight of 4000 • $\frac{9 \cdot 6 \times 10^8}{2 \cdot 4 \times 10^5}$ oe • $4(\cdot 0) \times 10^n$ where $n > 0$. • $a \times 10^3$ where $1 < a < 10$
	(2)	

#3

Component 1: Foundation Tier	Mark	Comment
Sight of 70% and 5×10^8 OR 71% and 5×10^8 OR 70% and $5 \cdot 1 \times 10^8$	B1	Not for sight of 71% and $5 \cdot 1 \times 10^8$
$0 \cdot 7 \times 5 \times 10^8$ oe OR $0 \cdot 71 \times 5 \times 10^8$ oe OR $0 \cdot 7 \times 5 \cdot 1 \times 10^8$ oe	M1	Allow for $0 \cdot 71 \times 5 \cdot 1 \times 10^8$ If 5×10^8 or 5.1×10^8 is written in ordinary form, condone a slip by a power of 10 for M1. e.g. $0 \cdot 7 \times 50\,000\,000$
$3 \cdot 5 \times 10^8$ (km^2) ISW OR $3 \cdot 55 \times 10^8$ ISW OR $3 \cdot 57 \times 10^8$ ISW	A1	CAO Award B1 M1 A1 for an unsupported answer of $3 \cdot 5 \times 10^8$ (km^2).
	(3)	

#4

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(b)(i) 8×10^7	B2	B1 for $...\times10^7$ or for 80 000 000
(b)(ii) $(3\times10^5 =)\ 300\,000$ or $(40\,000 =)\ 4\times10^4$ $\frac{3\times10^5}{4\times10^4}$ or $\frac{300\,000}{40\,000}$ = 7.5 (so more than 7)	B1 B1	***Alternative method 1:*** *$7\times40000 = 280\,000$* *B1* *$(3\times10^5 =)\ 300\,000$ (so more than 7)* *B1* ***Alternative method 2:*** $\frac{7\times40000}{300000}$ *M1* $\frac{280000}{300000}$ *(which is less than 1)* *A1*

#5

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) 4.3×10^{11}	B2	B1 for sight of the correct value not in standard form e.g. 0.43×10^{12} or 430 000 000 000
(b) 7.9×10^5	B2	Be aware of correct answer from incorrect work. Award B0. B1 for the correct value not in standard form e.g. 79×10^4 or 790 000 If no marks, award SC1 for 760000 + 30000 seen with a slip in the addition but their answer correctly converted into standard form
	(4)	

#6

Component 1: Foundation Tier	Mark	Comment
(a) $600\,000 \div 20$ or $(6\times10^5)\div(2\times10)$	M1	
3×10^4	A1	Award M1 A0 for any one of the following: • 30 000 • 0.3×10^5
(b) $60\times3\times10^8$ oe	M1	e.g. $300\,000\,000\times60$
180×10^8 or 18 000 000 000 oe	A1	CAO
$1{\cdot}8(0)\times10^{10}$ (litres per hour)	A1	FT 'their $60\times3\times10^8$', provided M1 awarded. If no marks, award SC1 for 5×10^6
	(5)	

#7

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a)(i) 0.0048	B1	
(a)(ii) 1.15×10^{21}	B2	B1 for correct answer in incorrect form e.g. 11.5×10^{20}
(b) $(3 \times 10^6) \div (2 \times 10^6)$ oe 1.5 km	M1 A1 B1	Allow for $(3 \times 10^6) \div (1.8 \times 10^6)$ FT 'their estimate' If M0 then allow SC1 for sight of $(2.99 \times 10^6) \div (1.799 \times 10^6)$ Appropriate unit for their answer e.g. 1500 m gets M1 A1 B1; allow for 'km' even if no calculation attempted
	(6)	

Standard Form: Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
#4	3	
Total	6	

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Marking Scheme

#1

	Mark	Comment
(b) $4.5x10^{14}$	B1	

#2

Component 2: Foundation Tier	Mark	Comment
(c) 6.3×10^{6}	B1	

#3

Component 2: Foundation Tier	Mark	Comment
The correct answer circled or clearly indicated $2{\cdot}4 \times 10^{-6}$	B1	
	(1)	

#4

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
(a) indicates 12.5×10^{7}, 12000000 AND 7 million	B1	
(b) 1.3×10^{5}	B2 (3)	Award B1 for 1.3×10^{n} or 130000 or $A \times 10^{5}$ or 13×10^{4}.

Upper and Lower Bounds: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	4	
#2	5	
Total	9	

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
(a) 1 ≤ time difference ≤ 3	B2	Not from wrong working B1 for one end correct in the inequality or for sight of both values
(b)		Accept a statement such as 'The van is always less than 6 m long/the maximum length acceptable' stated once only; may be written anywhere If lengths are given, they must be within the appropriate limits.
Valid example for may be correct e.g. Van 590 cm AND trailer 198 cm	E1	For the van accept any statement such as 'The van is always less than 6 m long/the maximum length acceptable' or any values satisfying: 585 cm ≤ length of the van < 595 cm AND 195 cm ≤ length of the trailer ≤ 200 cm Allow e.g. 'The trailer could be less than 200 (cm).' Example might use the values given in the question (590 cm and 200 cm) and not consider the values are rounded to the nearest 10 cm.
Valid example for may not be correct e.g. (Van 590 cm and) trailer 201 cm	E1	(For the van accept any statement such as 'The van is always less than 6 m long' or any values satisfying: 585 cm ≤ length of the van < 595 cm AND) 200 cm < length of the trailer < 205 cm Allow e.g. 'The trailer could be more than 200 (cm)/the maximum length acceptable' or 'the length of the trailer could be 205 (cm)'.
	(4)	

#2

	Mark	Comment
(a) 50 inches = 127 cm Might possibly be safe and use of the limit of accuracy e.g. 'she could be only 126.9 cm tall' or 'Her height could be anywhere between 126.5 and 127.5.'	B2 B1	B1 for e.g. 50.8 + 50.8 + 25.4 NB bounds are not required, though could be used. Candidates must indicate they have interpreted the given limit of accuracy correctly in some way. Must not contain contradictions or errors.
(b)(i) Valid assumption eg 'Jenna has not grown since she was last measured' or 'Jenna is **still** 127 cm' or Jenna has not had a growth spurt.' or 'Jenna is wearing the same shoes that she was when she was measured.'	E1	Any valid assumption that indicates that Jenna may no longer be the same height Not for comments assuming her height is 127 or a rounded version of this, as this is given information
(b)(ii) Valid impact based on their assumption and decision in part *(a)* e.g. 'Jenna may now be definitely tall enough to ride.'	E1	Comments such as 'My answer would be different' are not acceptable
	(5)	

Upper and Lower Bounds: Calculator

Question	Maximum Mark	Mark Awarded
#1	2	
Total	2	

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Marking Scheme

#1

Eduqas Autumn 2018 Component 2: Foundation Tier	Mark	Comment
93.5(m) and 94.5(m) in correct order	B2 (2)	B1 for either 93.5 or 94.5 seen.

Surds: Non-Calculator

Question	Maximum Mark	Mark Awarded
#1	1	
#2	1	
#3	1	
Total	3	

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Marking Scheme

#1

Component 1: Foundation Tier	Mark	Comment
$21\sqrt{2}$	B1	
	(1)	

#2

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
(a) $11\sqrt{5}$	B1	Mark final answer

#3

GCSE (9-1) Mathematics Component 1: Foundation Tier	Mark	Comment
*(a) $8\sqrt{7}$	B1	Accept $8\sqrt[2]{7}$ or $8 \times \sqrt{7}$

Miscellaneous: Calculator

Question	Maximum Mark	Mark Awarded
#1	9	
Total	9	

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Marking Scheme

#1

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
(a) 2016	B1	
(b) 7:6	B2	B1 for 63:54 Or B1 for 'their 63:54' correctly simplified. SC1 for an answer of 6:7
(c) 41 x 2500 or 54 x 2150 54 x 2150 - 41 x 2500 Or 41 x 2500 – 54 x 2150 13600(p) or (£)136 (£)136 AND spent more in 2015	M1 M1 A1 A1	Accept equivalent work in £ FT 'their 41' and 'their 54' provided that one is correct Digits '136' implies M2, for example 1.36 CAO. Allow -13600(p) or –(£)136 FT 'their 136' Do not accept place value errors
(d) 0.2 x 50(p) + 50 or equivalent = 60(p)	M1 A1 (9)	Or equivalent full method.