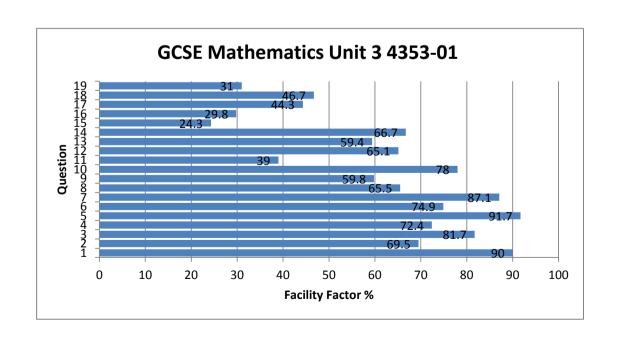


WJEC 2014 Online Exam Review

GCSE Mathematics Unit 3 4353-01

All Candidates' performance across questions

?	?	?	?	?	?	?	
Question Title	N	Mean	S D	Max Mark	F F	Attempt %	
1	1898	5.4	1.1	6	90	100	
2	1892	2.1	1.1	3	69.5	99.6	
3	1782	1.6	0.7	2	81.7	93.8	
4	1897	3.6	1.2	5	72.4	99.9	
5	1896	5.5	0.7	6	91.7	99.8	
6	1878	4.5	1.6	6	74.9	98.9	\mid \leftarrow
7	1829	0.9	0.3	1	87.1	96.3	
8	1892	6.5	2.4	10	65.5	99.6	\leftarrow
9	1790	3	1.8	5	59.8	94.3	
10	1849	3.9	1.7	5	78	97.4	
11	1652	1.2	1.2	3	39	87	\leftarrow
12	1806	3.3	1.8	5	65.1	95.1	
13	1811	3	1.7	5	59.4	95.4	\leftarrow
14	1882	2	1	3	66.7	99.1	
15	1718	0.5	0.9	2	24.3	90.5	
16	1601	1.2	1.7	4	29.8	84.3	\leftarrow
17	1585	0.9	1	2	44.3	83.5	
18	1642	1.4	1.3	3	46.7	86.5	
19	1738	1.2	1.7	4	31	91.5	



You will be assessed on the quality of your written communication in this question.	
Jane has £15 to spend on buying packets of biscuits. A packet of biscuits costs 89p.	
She buys as many packets of biscuits as possible.	
How many packets of biscuits does she buy and what change does she receive? Show all your working.	[6]



6.	You will be assessed on the quality of your written communication in this question. Jane has £15 to spend on buying packets of biscuits. A packet of biscuits costs 89p.
	She buys as many packets of biscuits as possible.
	How many packets of biscuits does she buy and what change does she receive? Show all your working. [6]
	$0.89p \times 10 = £8.90$ $-2 = £4.45 = 5$
	£8.90+4.45 £13.35 + 89 (1) £14.24
	She can buy up to 16 packets of biscuits and will receive 76p change.

	We will be a soliteration with a communication in this question
6.	You will be assessed on the quality of your written communication in this question.
	Jane has £15 to spend on buying packets of biscuits. A packet of biscuits costs 89p.
	She buys as many packets of biscuits as possible.
	How many packets of biscuits does she buy and what change does she receive? Show all your working. [6]
	0.89= 01 x 9.8.0
	$0.89p \times 10 = £8.90$ -2 = £4.45 = 5
	£8.90+4.45 = £13.35
	789 (1)
	£14.24
	She can buy up to 16 packets of biscuits and will receive 76p change.
	and will receive 76p Change
1	

6.	You will be assessed on the quality of your written communication in this question.
	Jane has £15 to spend on buying packets of biscuits. A packet of biscuits costs 89p.
	She buys as many packets of biscuits as possible.
	How many packets of biscuits does she buy and what change does she receive? Show all your working. [6]
	Jane has (15 to spend.
	Pactets or biscuits cost 89p.
	892×10=68.90
	890 × 15 = 613 .35
	899 × 16 =614.24
	Jone con buy 16 pages or biscuits
	for EIS and recieve 0.76p change.

6.	You will be assessed on the quality of your written communication in this question.
	Jane has £15 to spend on buying packets of biscuits. A packet of biscuits costs 89p.
	She buys as many packets of biscuits as possible.
	How many packets of biscuits does she buy and what change does she receive? Show all your working. [6]
	Jane has fis to spend.
	Pacreto or biscuits cost 89p.
	892 × 10 = 68.90
	290 x 15 = 613 .35
	899 4 16 -614.24
	Jone con by 16 saces or biscuits
	for EIS and recieve 0. 76p change.

You will be assessed on the quality of your written communication in this question.
Jane has £15 to spend on buying packets of biscuits. A packet of biscuits costs 89p.
She buys as many packets of biscuits as possible.
How many packets of biscuits does she buy and what change does she receive? Show all your working. [6]
89P = SO-89
Janes 515 - cost of A PACK of biscuits 515 - 50.89 = 16 PACKS of biscuits
16 PACKS OF BISCUITS X SO 89 = 514.24
Change recieced SIS - SI4.24 = 50.78
Janes gels 16 Parcks or biscures with

8b

(11)	Paris.	n ir
	The mean was found to be 15·8°C and the range was 29°C.	
	Use the mean and range to compare the temperatures recorded in Cardiff Paris.	and [2]



4353 010009

	Cardiff	Paris
Mean midday temperature (°C)	978M 10-5	15·8
Range of midday temperatures (°C)	20	29

(ii) Midday temperature readings were also recorded on the first day of each month in Paris.

The mean was found to be 15.8°C and the range was 29°C.

	The friedri was loand to be 1000 and the lange was 200.
07.40	Use the mean and range to compare the temperatures recorded in Cardiff and Paris.
TH	The mean difference in paris is
5.	3°c higher than in Cardiff
W	re range is 9°C higher in
Pa	ris compared to Cardiff
	` · · · · · · · · · · · · · · · · · · ·

	Cardiff	Paris
Mean midday temperature (°C)	9/8/11 10-5	15∙8
Range of midday temperatures (°C)	20	29

(ii) Midday temperature readings were also recorded on the first day of each month in Paris.

The mean was found to be 15.8°C and the range was 29°C.

Use the mean and range to compare the temperatures recorded in Cardiff and Paris.

12]

13. The mean difference in Paris is

15-3°C higher than in Cardiff

16. The range is 9°C higher in

17. Paris compared to Cardiff



(ii)	Midday temperature readings were also recorded on the first day of each month in Paris.
	The mean was found to be 15.8°C and the range was 29°C.
tho	Use the mean and range to compare the temperatures recorded in Cardiff and [2] New else temperatures recorded in Cardiff and [2] New else temperatures recorded in Cardiff and [2]
Of Pa	5.1 and a ranged diffrance of 9 Shewing
C	asterb bego tenpiture.

(ii)	Midday temperature readings were also recorded on the first day of each month in Paris.
	The mean was found to be 15.8°C and the range was 29°C.
11	Use the mean and range to compare the temperatures recorded in Cardiff and Paris. [2]
tho	new elect tempions has a diffina
Of	5.1 gail, a ranged diffrance of 9 Thening
Pa	if maybe hofter but choif hold a new
C	aster & begg tenpiture.

* 3	Cardiff	Paris
Mean midday temperature (°C)	10.5	15·8
Range of midday temperatures (°C)	20	29

of mid	day temperatures (°C)	20	29
(ii)	Midday temperature reading Paris.	gs were also recorded on t	he first day of each month in
3	The mean was found to be	15·8°C and the range was	29°C.
	Use the mean and range the Paris.	to compare the temperatu	res recorded in Cardiff and [2]
(Paris' mean n	niddag tempera	there is 5.3°C
	varmer than c		±
	Paris' range (of midday temi	evaroness is 9°C
r (wormer then	Cont Con	1:FF
,			

. * }	Cardiff	Paris
Mean midday temperature (°C)	10.5	15.8
Range of midday temperatures (°C)	20	29

of mide	day temperatures (°C)	20	29	
(ii)	Midday temperature reading Paris.	gs were also recorded on t	ne first day of each month in)
	The mean was found to be	15·8°C and the range was	29°C.	
	Paris.		res recorded in Cardiff and [2]	
(Paris' Mean n	niddag tempera	there is 5.3°C	
C	sarmer than c	ordiff		
(Paris' range (of midday temt	levaroreps is 9°C	-
- <u>(</u>	Paris' range of	Core Core	1;ff	

11. A jug holds one and a half litres of water when full. A tank has dimensions 25 cm by 24 cm by 20 cm.

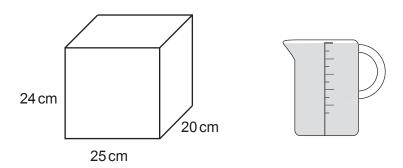
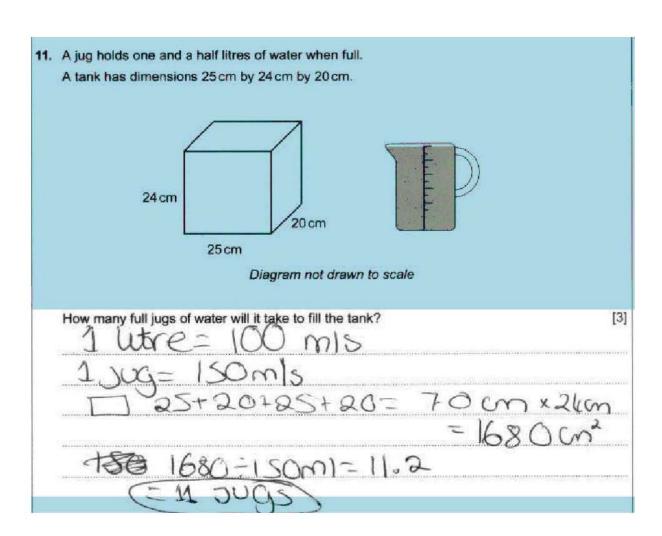
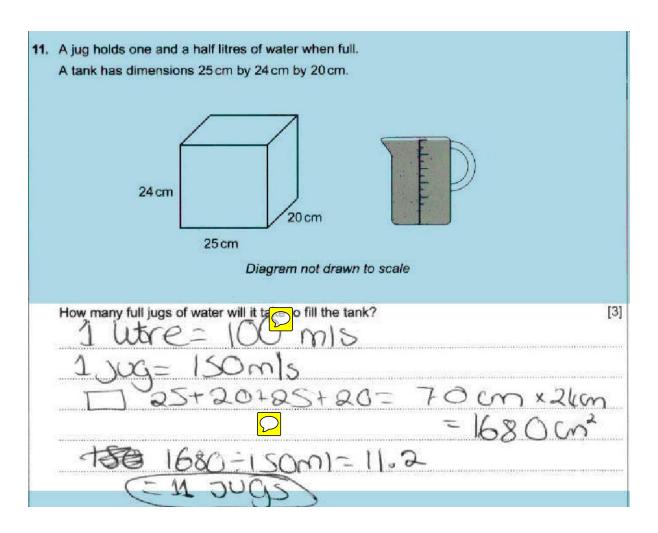


Diagram not drawn to scale

How many full jugs of water will it take to fill the tank?	[3]
	•••••







 A jug holds one and a half litres of water when full. A tank has dimensions 25 cm by 24 cm by 20 cm.

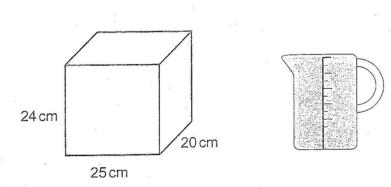


Diagram not drawn to scale

[3]

How many full jugs of water will it take to fill the tank? 24 × 25 × 20 = 12000 cm³ 1 litre = 1000cm3 = litre = 50 cm3 -120 12000-150 = 80. It needs 80 Lit jugs of water to cill the bank.

A jug holds one and a half litres of water when full.

A tank has dimensions 25 cm by 24 cm by 20 cm.

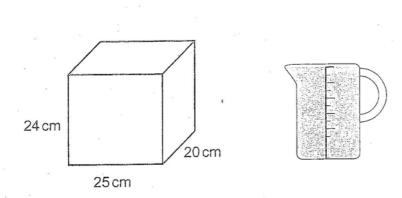


Diagram not drawn to scale

How many full jugs of water will it take to fill the tank?

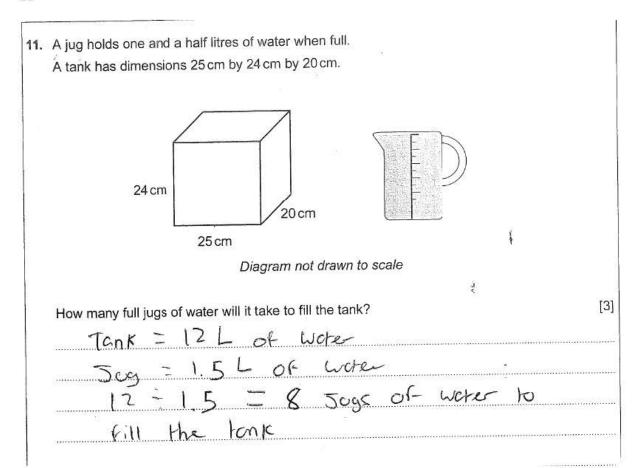
24 × Z S × ZO = 12000 cm³

1 Litre = 1000 cm³ ½ Litre = 50 cm³ ×

12000 ÷ 100 - 120 12000 ÷ 150 = 80.

The needs 80 Lit jugs of water

to fill the bank.



11. A jug holds one and a half litres of water when full.

A tank has dimensions 25 cm by 24 cm by 20 cm.

25 cm

Diagram not drawn to scale

How many full jugs of water will it take to fill the tank?

Tank = 12 of water

5 cg = 1.5 Log water

12 - 1.5 Sogs of water to

13.	Mr Jones pays for his gas by 12 equal monthly payments. Each monthly payment is worked out using the following information.	Examin only
	Mr Jones uses 15 000 units of gas in a year.	
	The cost of gas is 4.028 pence per unit used.	
	There is a fixed charge of £6.98 per month.	
	There is a discount of £48 per year.	
	Calculate Mr Jones's monthly payment . [5] You must show all your working.	



13.		lones pays for his gas by 12 equal monthly payments. h monthly payment is worked out using the following information.	
	•	Mr Jones uses 15 000 units of gas in a year.	
		The cost of gas is 4.028 pence per unit used.	
		There is a fixed charge of £6.98 per month.	
	9	There is a discount of £48 per year.	
		culate Mr Jones's monthly payment . must show all your working.	[5]
92	MATERIAL STREET	15000-12 = 1250 units	
	1	250 per month	
		4.028 ×1250 = 5035-10 -£503.50	
	£	503.50 +£6 - 98 =£510 . 48	
		discount	
	9	£48 per year	.00110
	PE	er month	
	ENERGY.	48 fly - £510.48 + £4 monthly	
		12 = 514.48 disco	u
Š.	3000000	A W L N N N N N N N N N N	7
		without discount = £510 48	

	Mr Jones uses 15 000 units of gas in a year. The cost of gas is 4.028 pence per unit used. There is a fixed charge of £6.98 per month. There is a discount of £48 per year. sulate Mr Jones's monthly payment. must show all your working.	[5]
	15000-12 = 1250 units	
1	250 per month	
	4.028 ×1250 = 5035-10 =£503.50	
£	503.50 +£6.98 =£510.48	
D A	discount £48 per year er month	
	48 f4 - 1510 48 + F4 monthly 12 = 1514.48 disco	LL, Z
	Jithout discount = £510.48	

13. Mr Jones pays for his gas by 12 equal monthly payments. Each monthly payment is worked out using the following information.

- 13. Mr Jones pays for his gas by 12 equal monthly payments.

 Each monthly payment is worked out using the following information.
 - Mr Jones uses 15000 units of gas in a year.
 - The cost of gas is 4.028 pence per unit used.
 - There is a fixed charge of £6.98 per month.
 - There is a discount of £48 per year.

Calculate Mr Jones's monthly payment. You must show all your working.

. [5]

15000 × 4.028: 60420 pence per unit for a year. 60420: 12=5035 pence a month

SO 5035 pence c's (₹503.50)

£503.50 +£6.98 = £510.48 (mon)

£510.48 x12 = £6125.76 à gear luce

£6125.76-£48=€6077.76

6077.76:12=£506.48. (monthly)

Mr Jones's monthly payment is \$506.48

prost be consistency

(only one finer)



13. Mr Jones pays for his gas by 12 equal monthly payments. Each monthly payment is worked out using the following information.	only
 Mr Jones uses 15000 units of gas in a year. The cost of gas is 4.028 pence per unit used. There is a fixed charge of £6.98 per month. There is a discount of £48 per year. 	4
Calculate Mr Jones's monthly payment. You must show all your working.	
unit for a year	
60420-12=5035 pence à month	
50 5035 pence c's (₹ 503.50)	
\$503.50 +£6.98 = £510.48 (mon)	
F 510 10 - F(175 76:2)	D 14
$f = 510.48 \times 12 = f = 6125.76$ a gear less $f = 6125.76 = f = 6077.76$) B
6077.76 - 12 = £506.48. (monthly)	
Mr Jones's monthly pagment is \$506.48 D	AC
Miss be sensistens only one every	

With the same of

13. Mr Jones pays for his gas by 12 equal monthly payments. Each monthly payment is worked out using the following information.

- · Mr Jones uses 15000 units of gas in a year.
- . The cost of gas is 4.028 pence per unit used.
- There is a fixed charge of £6.98 per month.
- · There is a discount of £48 per year.

Calculate Mr Jones's monthly payment.
You must show all your working.

15.000 units used at 4.028 pence per unit

Total cost for units: 15000 to 0.04028 =

£ 6.98 change per month = £83.76

£ 6.99 change per month = £83.76

Mr Jones pays for his gas by 12 equal monthly payments.
Each monthly payment is worked out using the following information.

- Mr Jones uses 15 000 units of gas in a year.
- The cost of gas is 4.028 pence per unit used.
- There is a fixed charge of £6.98 per month.
- There is a discount of £48 per year.

Calculate Mr Jones's monthly payment. You must show all your working.
15,000 units used at 4.028 peace per unit
Total cost for units = 15000 x 0.04028 = £664.20 per year For units
£ 6.98 phony per month = £83.76
£604.20 + 83.76
£ 687.96 - 48 - discount For Year
£639.96 = Total cost for Whole
639.96 12 - Number of months = £83-33
Mr Jones Pays £53.33 am a monthly Payment For his gas.

16.	Two brothers, Gethin and David, share a sum of money in the ratio 2:7. David gets £30 more than Gethin. Calculate how much money the brothers share.	[4]
		· · · · · · ·
		······································

	30 un 2.7	
	30 - 9 = 3.3	
	2 x 3 .3 . 7 x 3 3	
	FCBG FORN	

David gets x	.30 more u	d David, share a sum of money in the rat an Gethin. Calculate how much money th	b blothers share.	[4]
30	un	. 2 . 7,		
		9		
30 -	9 = 3	. 3		
2 × 3	3	7×33		
£ 6,0	6 ;	230		

5=30	
1=30:5=56	
2xb = 12	
7×6 = 42	
F12:£47.	
Calla a 117 Day 2012	

	d David, share a sum of money in the ratio 2:7. In Gethin. Calculate how much money the brothers share. $5 = 30$	
The second secon	1=30:5=\$6	
	2xb = 12	
	7×6 = 42	

	F17:F42	
nan-arian arian aria	C 11 - ft2 D 1 (1 2	
	Lethin-Ello lavid-ELC	

16.	Two brothers, Gethin and David, share a sum of money in the ratio 2:7. David gets £30 more than Gethin. Calculate how much money the brothers share. [4]
	2+7=9
	7-2=5.
	5=£30 30-5=6
	Gethin gets = \$(6xz) = £1z.
	David gets = 12 + 30 = £42
	£42+£12=£54.
	6×9=£54.

16.	Two brothers, Gethin and David, share a sum of money in the ratio 2:7. David gets £30 more than Gethin. Calculate how much money the brothers share.	[4]
	2+7=9	
	7-2=5.	
	5=£30 30-5=6	
	Gethin gets = € (6×2) = £12.	
	David gets = 12 + 30 = £42	
	£42+ £12 = £54.	
	6×9-£540	