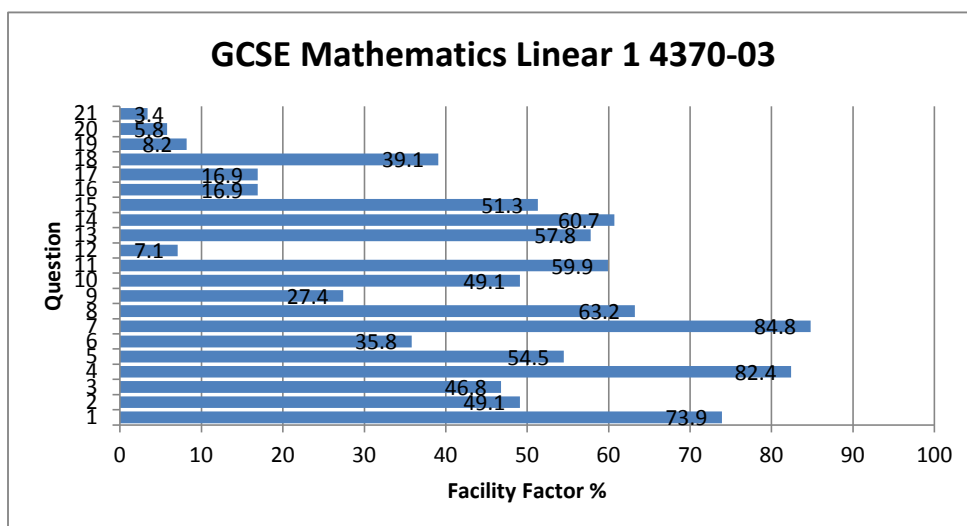


GCSE Mathematics Linear 1 4370-03

All Candidates' performance across questions

Question Title	N	Mean	S D	Max Mark	FF	Attempt %
1	19353	7.4	2.3	10	73.9	100
2	19310	2.9	1.6	6	49.1	99.7
3	18733	2.8	2	6	46.8	96.8
4	19254	2.5	0.8	3	82.4	99.5
5	19301	3.3	1.4	6	54.5	99.7
6	18782	2.1	2	6	35.8	97
7	19168	2.5	0.8	3	84.8	99
8	18434	2.5	1.5	4	63.2	95.2
9	16660	1.1	1.3	4	27.4	86
10	18987	2.9	1.4	6	49.1	98.1
11	19256	2.4	1.3	4	59.9	99.5
12	16204	0.1	0.5	2	7.1	83.7
13	18717	3.5	1.4	6	57.8	96.7
14	18486	3	1.9	5	60.7	95.5
15	18899	3.1	1.7	6	51.3	97.6
16	16257	0.7	1.2	4	16.9	84
17	17325	0.7	1.1	4	16.9	89.5
18	16929	1.6	1.5	4	39.1	87.4
19	17980	0.2	0.7	3	8.2	92.9
20	12406	0.2	0.5	3	5.8	64.1
21	11450	0.2	0.6	5	3.4	59.1



3. *You will be assessed on the quality of your written communication in this question.*

A window cleaner takes 15 minutes to clean each window in a large building.
He charges using the following formula:

$$\text{payment} = \text{£8} \times \text{number of hours worked} + \text{call-out charge}$$

Calculate the payment for cleaning 20 windows when the call-out charge is £12.

[6]

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3.

Calculate the payment for cleaning 20 windows when the call-out charge is £12.

[6]

Payment = £8 × number of hours worked + £12

We need to find out the number of hours worked:

15 minutes × 20 windows
 $15 \times 20 = 300$ → take off the nought
 $15 \times 2 = 30$
 (Add on the nought) = 300
 There is 60 minutes in an hour.

He worked five hours.

$$\text{Payment} = £8 \times 5 + £12$$

$$= £8 \times 5 = 40$$

$$= £40 + £12 = £52$$

He receives

He is paid £52
 for cleaning 20 windows.

60
120
240
300

60
120
180
240
300

3.

Calculate the payment for cleaning 20 windows when the call-out charge is £12.

[6]

Payment = £8 × number of hours worked + £12

We need to find out the number of hours worked:

~~15~~ 15 minutes × 20 windows
~~15~~ 15 × 20 → take off the nought
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He receives

He is payed £52
 for cleaning 20 windows.

60
120
240
300

60
120
180
240
300



3.

Calculate the payment for cleaning 20 windows when the call-out charge is £12.

[6]

The window cleaner will work a total of five hours, because it will take him fifteen minutes to clean each of the twenty windows. The total payment for cleaning twenty windows with a call-out charge of twelve pounds ~~and a payment of eight pounds~~ is equal to fifty two pounds total payment.

3.

Calculate the payment for cleaning 20 windows when the call-out charge is £12.

[6]

The window cleaner will work a total of ~~5~~ five hours, because it will take him fifteen minutes to clean each of the twenty windows. The total payment for cleaning twenty windows with a call-out charge of twelve pounds ~~and a payment of eight pounds~~ is equal to fifty two pounds total payment.



6. Two rectangles, each 9 cm by 3 cm, and an overlapping rectangle, 8 cm by 3 cm, are placed so that they make the H shape shown in the diagram.

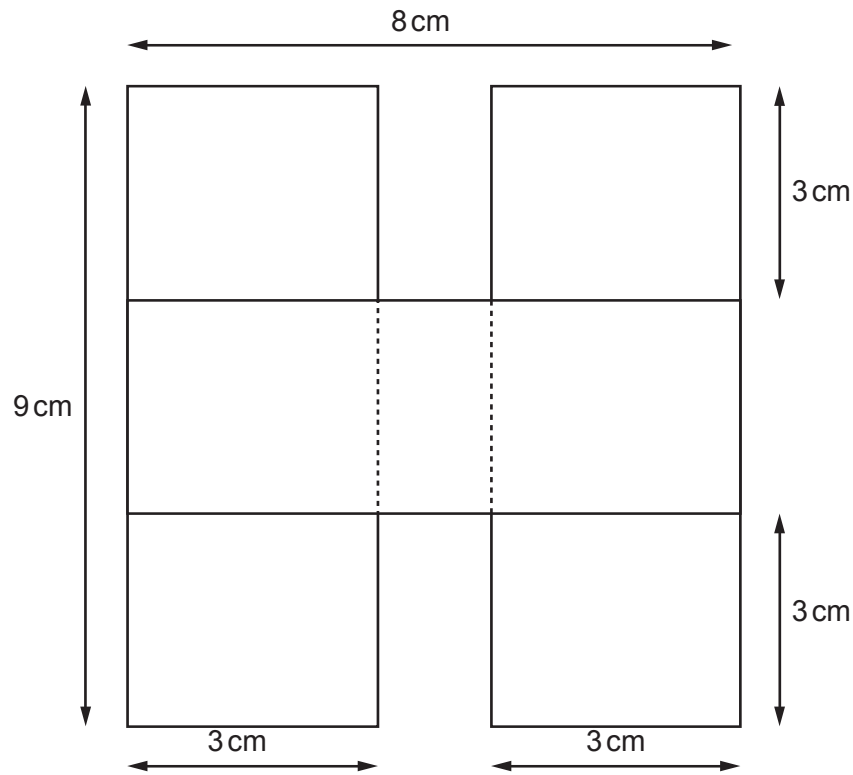


Diagram not drawn to scale

- (a) Calculate the perimeter of the shape.

[3]

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- (b) Calculate the area of the shape.
Write down the units of your answer.

[3]

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6. Two rectangles, each 9 cm by 3 cm, and an overlapping rectangle, 8 cm by 3 cm, are placed so that they make the H shape shown in the diagram.

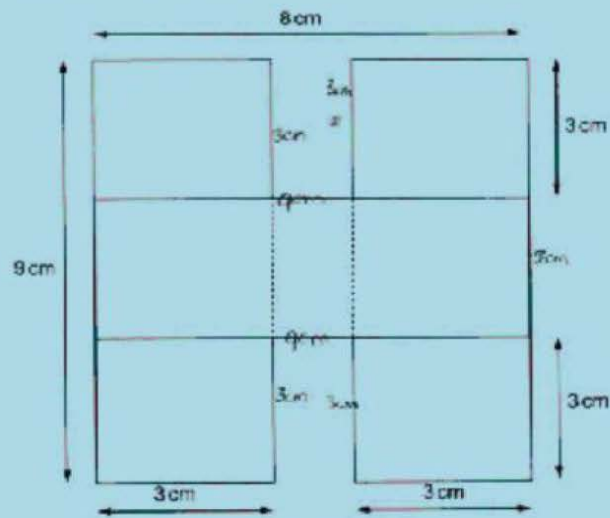


Diagram not drawn to scale

- (a) Calculate the perimeter of the shape.

[3]

$$8 + 9 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3$$

45cm

- (b) Calculate the area of the shape.
Write down the units of your answer.

[3]

$$9 \times 3 = 27$$

27

$$3x2 = 6$$

27

$$9 \times 3 = 27$$

$$54 + 6 = 60$$

$$= 600 \text{ m}^2$$

6. Two rectangles, each 9 cm by 3 cm, and an overlapping rectangle, 8 cm by 3 cm, are placed so that they make the H shape shown in the diagram.

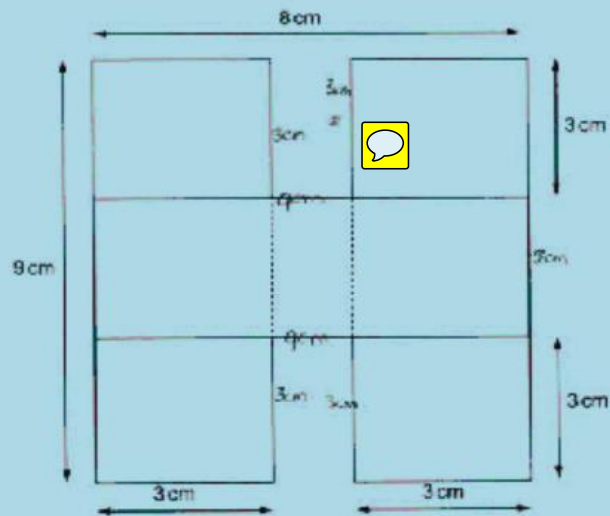


Diagram not drawn to scale

- (a) Calculate the perimeter of the shape.

[3]

$$8 + 9 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3$$

$$45 \text{ cm}$$

- (b) Calculate the area of the shape.
Write down the units of your answer.

[3]

$$9 \times 3 = 27$$

$$27$$

$$3 \times 2 = 6$$

$$27$$

$$9 \times 3 = 27$$



$$= 60 \text{ cm}^2$$

$$54 + 6 = 60$$

$$1$$

9. A rectangular tank has a length of 20 cm, a width of 15 cm and a height of 10 cm. Water is poured into the tank until it is half full. Calculate the volume of the water in **litres**.

[4]

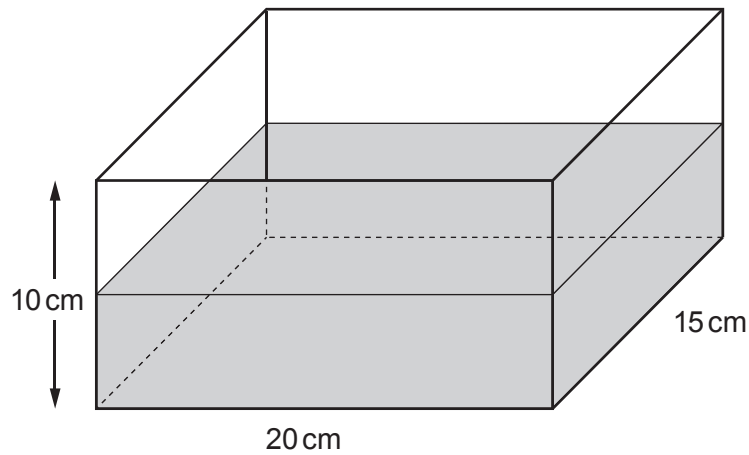


Diagram not drawn to scale

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9. A rectangular tank has a length of 20 cm, a width of 15 cm and a height of 10 cm. Water is poured into the tank until it is half full. Calculate the volume of the water in **litres**. [4]

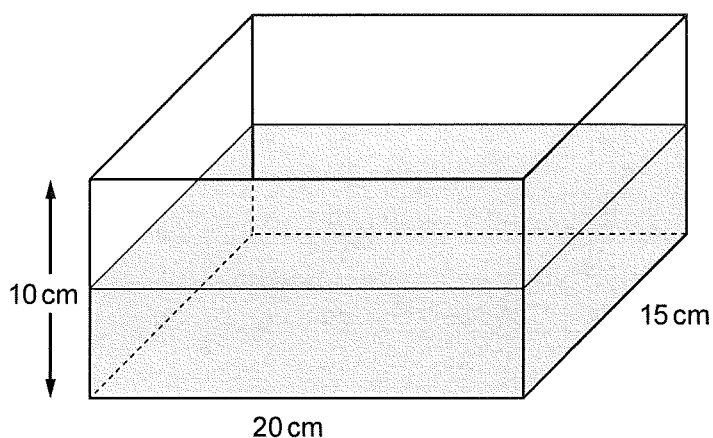


Diagram not drawn to scale

~~XXXXXXXXXXXX~~

~~XXXXXXXXXXXX~~

Length x width x Height

$$20 \times 15 \times 10 = 3000 \text{ cm}^3$$

$$3000 \text{ cm}^3 = 30 \text{ litres}^3$$



9. A rectangular tank has a length of 20 cm, a width of 15 cm and a height of 10 cm. Water is poured into the tank until it is half full. Calculate the volume of the water in litres. [4]

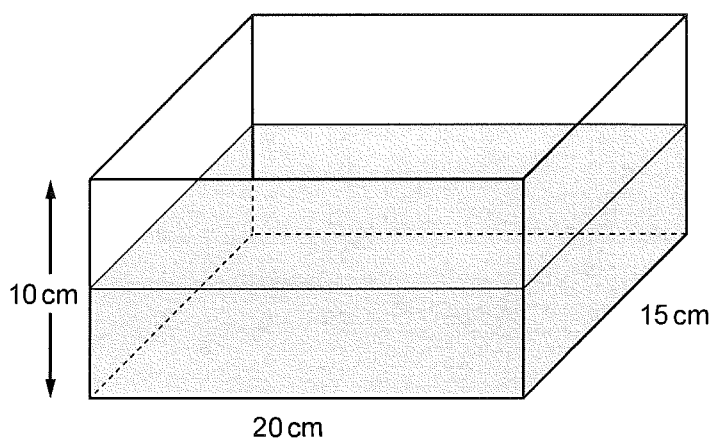


Diagram not drawn to scale

~~XXXXXXXXXXXX~~

~~XXXXXXXXXXXX~~

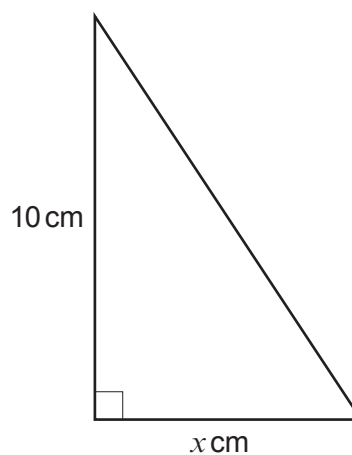
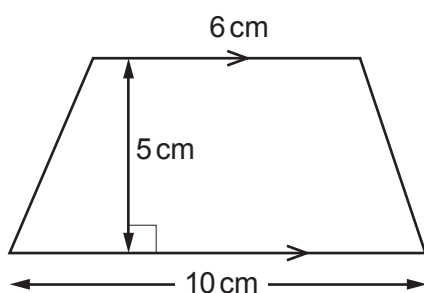
Length x width x Height

$$20 \times 15 \times 10 = 3000 \text{ cm}^3$$

$$3000 \text{ cm}^3 = 30 \text{ litres}$$



16. The area of the trapezium is equal to the area of the right-angled triangle.



Diagrams not drawn to scale

Calculate the value of x .

[4]

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16.

Calculate the value of x . [4]

Area of trapezium = $\frac{6+10}{2} \times 5 = 50 = 40 \text{ cm}^2$

$10 \times x = 40 \text{ cm}^2$

~~$x = 4$~~

$x = 4$

16.

Calculate the value of x . [4]

Area of trapezium = $\frac{6+10}{2} \times 5 = 50 = 40 \text{ cm}^2$

$10 \times x = 40 \text{ cm}^2$

~~$x = 4$~~

$x = \underline{4}$

16.

Calculate the value of x.

[4]

$$\text{Area of trapezium} = \frac{1}{2}(a+b)h$$

$$\text{Area of trapezium} = \frac{1}{2}(6+10)5$$

$$\text{Area} = \frac{1}{2}(16)5$$

$$\text{Area} = 16 \times 5 = 80$$

$$\text{Area} = \frac{80}{2} = 40\text{cm}^2$$

$$\text{Area of triangle} = \frac{B \times H}{2}$$

$$\text{Area of triangle} = \frac{x \times 10}{2}$$

$$x = 8\text{cm}$$

16.

Calculate the value of x.

[4]

$$\text{Area of trapezium} = \frac{1}{2}(a+b)h$$

$$\text{Area of trapezium} = \frac{1}{2}(6+10)5$$

$$\text{Area} = \frac{1}{2}(16)5$$

$$\text{Area} = 16 \times 5 = 80$$

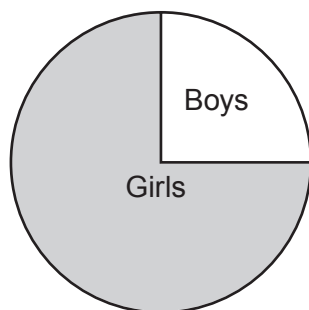
$$\text{Area} = \frac{80}{2} = 40\text{cm}^2$$

$$\text{Area of triangle} = \frac{B \times H}{2}$$

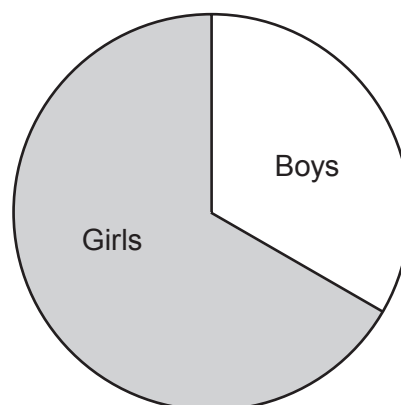
$$\text{Area of triangle} = \frac{x \times 10}{2}$$

$$x = 8\text{cm}$$

17. The pie charts show the proportion of boys to girls in class A and class B.



Class A



Class B

There are more pupils in class B than in class A.

There are 4 boys in class A.

There are $1\frac{1}{2}$ times as many girls in class B than in class A.

How many boys are there in class B?

[4]

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17.

How many boys are there in class B?	[4]
4 Boys ^{Boys} is class A and 12 girls in class A which makes a total of 16 in class A	
There are 18 girls in class B	
$6 + 12 = 18$	
So there is 6 boys in class B	

17.

How many boys are there in class B? [4]

4 ~~boys~~^{boys} is class A and 12 girls in class A which makes a total of 16 in class A

There are 18 girls in class B

$6 + 12 = 18$

So there is 6 boys in class B

17.

How many boys are there in class B?

[4]

$$4 \times 3 = 12 \times 2 = 24 + 12 = 36 - 4$$
$$36 \div 4 = 9$$

Answer: 9

17.

How many boys are there in class B?

[4]

$$4 \times 3 = 12 \times 2 = 24 + 12 = 36 - 4$$
$$36 \div 4 = 9$$



Answer: 9

