Name: _____

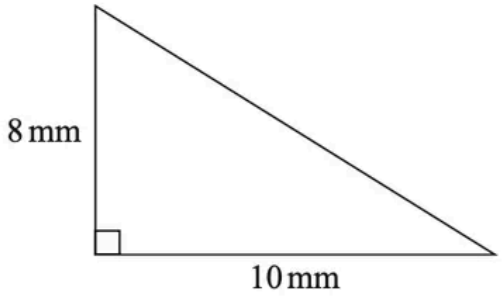
GCSE (1 - 9) Area and Perimeter	Solutions:

These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk

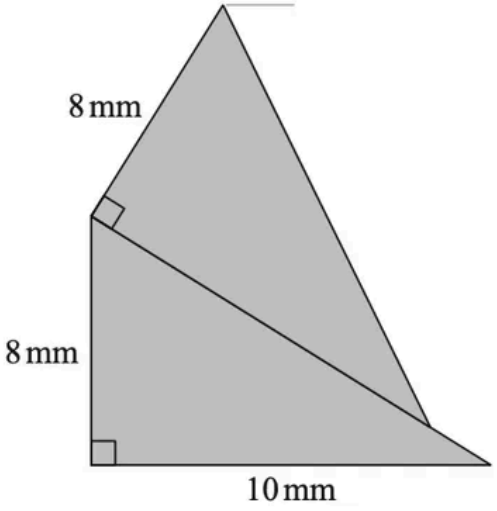
Qu	Paper where the question appeared	Qu	Paper where the question appeared
1	Edexcel, GCSE, Autumn 2021, Paper 2F, Q25	16	Edexcel, GCSE, Summer 2018, Paper 3F, Q17
2	Edexcel, GCSE, Autumn 2021, Paper 3F, Q19	17	Edexcel, GCSE, Summer 2018, Paper 3F, Q21
3	Edexcel, GCSE, Autumn 2020, Paper 3F, Q13	18	Edexcel, GCSE, Autumn 2017, Paper 1F, Q8
4	Edexcel, GCSE, Autumn 2020, Paper 3F, Q26	19	Edexcel, GCSE, Autumn 2017, Paper 1F, Q28
5	Edexcel, GCSE, Autumn 2019, Paper 3F, Q14	20	Edexcel, GCSE, Autumn 2017, Paper 2F, Q10
6	Edexcel, GCSE, Summer 2019, Paper 1F, Q18	21	Edexcel, GCSE, Autumn 2017, Paper 3F, Q24
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9	Edexcel, GCSE, Summer 2019, Paper 2F, Q13	24	Edexcel, GCSE, Summer 2022, Paper 3F, Q16
10	Edexcel, GCSE, Summer 2019, Paper 2F, Q15		
11	Edexcel, GCSE, Summer 2019, Paper 3F, Q16		
12	Edexcel, GCSE, Autumn 2018, Paper 2F, Q13		
13	Edexcel, GCSE, Autumn 2018, Paper 2F, Q24		
14	Edexcel, GCSE, Autumn 2018, Paper 3F, Q17		
15	Edexcel, GCSE, Summer 2018, Paper 3F, Q12		

1

Here is a right-angled triangle.



The shaded shape below is made from two of these triangles.



Work out the perimeter of the shaded shape.
Give your answer correct to 3 significant figures.

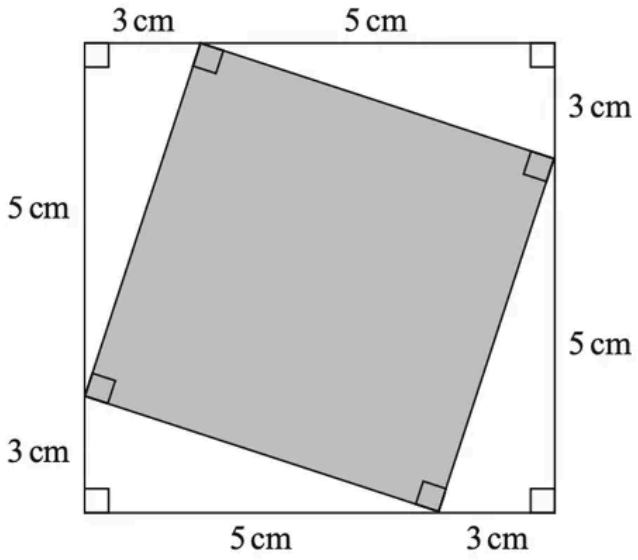
..... mm

(Total for Question 25 is 4 marks)

[Edexcel, GCSE, Autumn 2021, Paper 2F, Q25]

2

This diagram shows two squares.



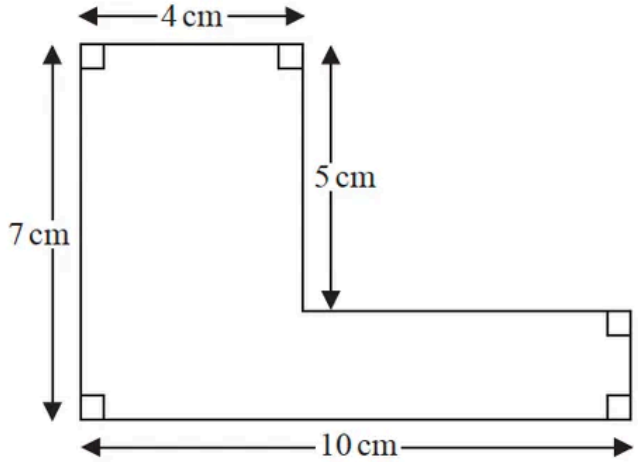
Work out the area of the square shown shaded in the diagram.

.....

(Total for Question 19 is 4 marks)

[Edexcel, GCSE, Autumn 2021, Paper 3F, Q19]

3



Work out the perimeter of this shape.

..... cm

(Total for Question 13 is 2 marks)

[Edexcel, GCSE, Autumn 2020, Paper 3F, Q13]

4

Maisie knows that she needs 3 kg of grass seed to make a rectangular lawn 5 m by 9 m.

Grass seed is sold in 2 kg boxes.

Maisie wants to make a rectangular lawn 10 m by 14 m.
She has 5 boxes of grass seed.

(a) Has Maisie got enough grass seed to make a lawn 10 m by 14 m?
You must show all your working.

(4)

Maisie opens the 5 boxes of grass seed.

She finds that 4 of the boxes contain 2 kg of grass seed.
The other box contains 1 kg of grass seed.

(b) Does this affect whether Maisie has enough grass seed to make her lawn?
Give a reason for your answer.

.....

.....

.....

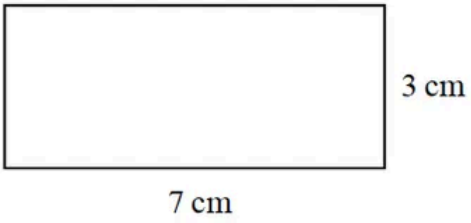
(1)

(Total for Question 26 is 5 marks)

[Edexcel, GCSE, Autumn 2020, Paper 3F, Q26]

5

Here is a rectangle.



Coby has to find the perimeter of this rectangle.

He writes,

Perimeter = 7×3

(a) What mistake has Coby made?

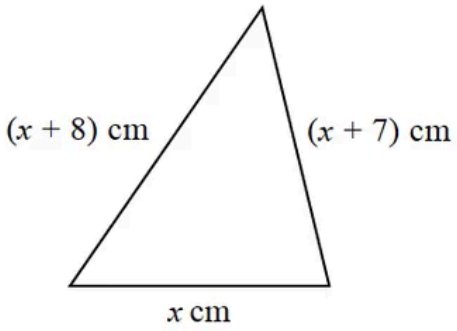
.....

.....

.....

(1)

Here is a triangle.



Iram solves a problem about this triangle to find the value of x.

Her answer is

$x = -2$

(b) Explain why Iram's answer must be wrong.

.....

.....

.....

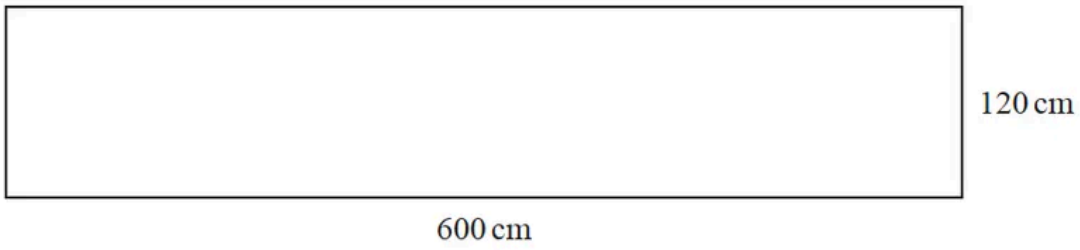
(1)

(Total for Question 14 is 2 marks)

[Edexcel, GCSE, Autumn 2019, Paper 3F, Q14]

6

The diagram shows a rectangular garden path.



Wasim is going to cover the path with paving stones.
Each paving stone is a square of side 30 cm.
Each paving stone costs £2.50

Wasim has £220 to spend on paving stones.

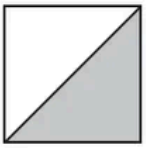
Show that he has enough money to buy all the paving stones he needs.

(Total for Question 18 is 4 marks)

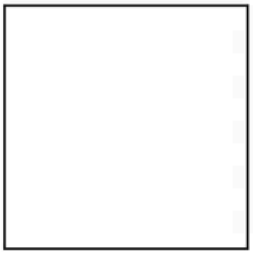
[Edexcel, GCSE, Summer 2019, Paper 1F, Q18]

7

Here are two squares, **A** and **B**.



A



B

The length of the side of square **A** is 50% of the length of the side of square **B**.

Express the area of the shaded region of square **A** as a percentage of the area of square **B**.

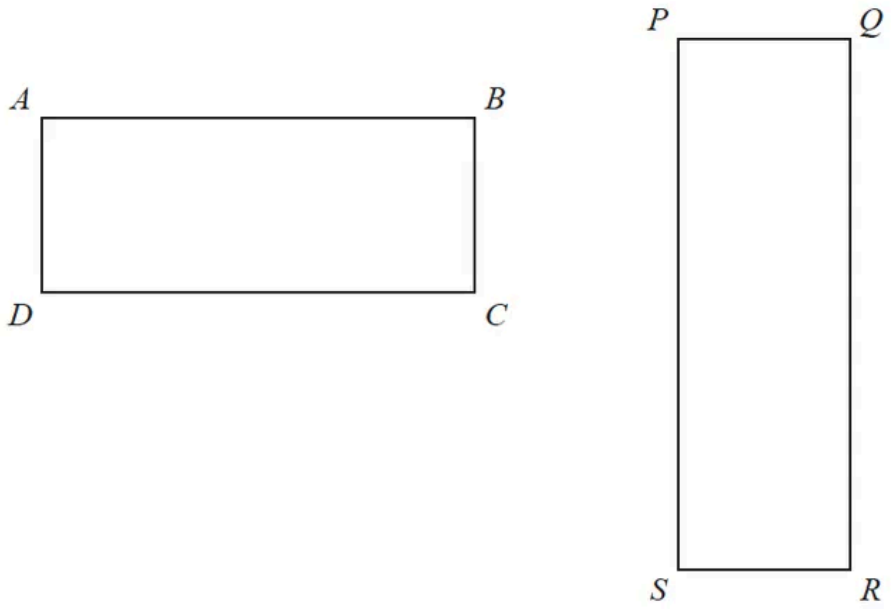
..... %

(Total for Question 20 is 3 marks)

[Edexcel, GCSE, Summer 2019, Paper 1F, Q20]

8

Here are two rectangles.



$QR = 10\,\text{cm}$
$BC = PQ$

The perimeter of $ABCD$ is 26 cm
The area of $PQRS$ is $45\,\text{cm}^2$

Find the length of AB.

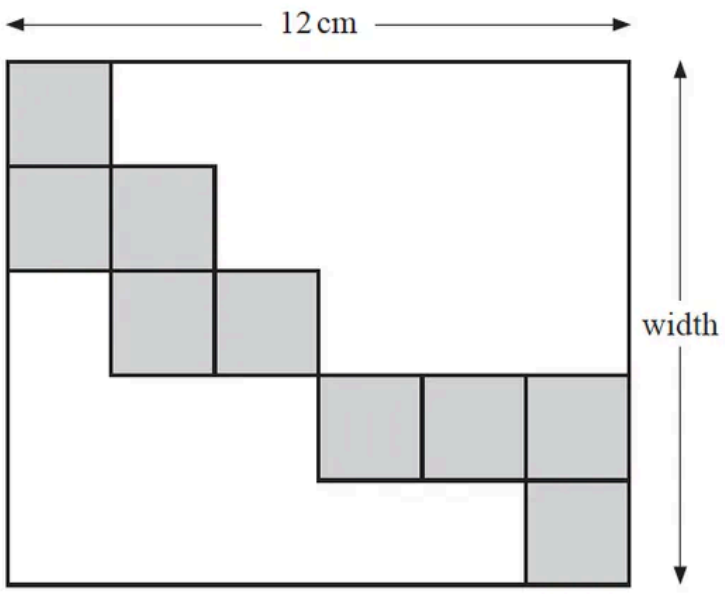
..... cm

(Total for Question 28 is 4 marks)

[Edexcel, GCSE, Summer 2019, Paper 1F, Q28]

9

The diagram shows nine identical squares inside a rectangle.



The length of the rectangle is 12 cm.

Work out the width of the rectangle.

..... cm

(Total for Question 13 is 3 marks)

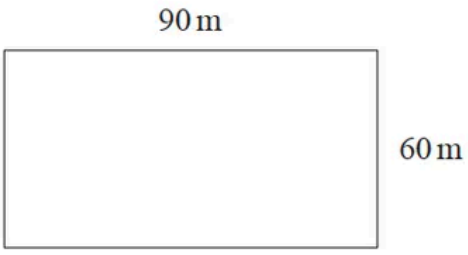
[Edexcel, GCSE, Summer 2019, Paper 2F, Q13]

10

A garden is in the shape of a rectangle 90 m by 60 m.

Flowers are grown in 40% of the garden.
The rest of the garden is grass.

Work out the area of the garden that is grass.



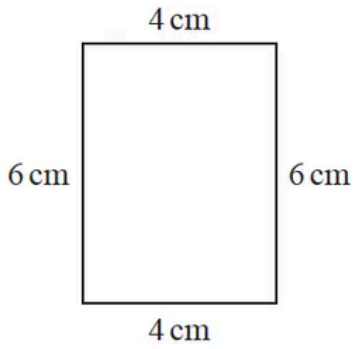
..... m^2

(Total for Question 15 is 4 marks)

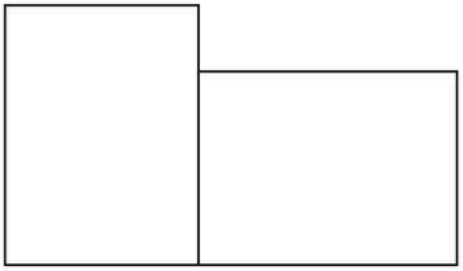
[Edexcel, GCSE, Summer 2019, Paper 2F, Q15]

11

Here is a rectangle.



The 6-sided shape below is made from two of these rectangles.



Work out the perimeter of this 6-sided shape.

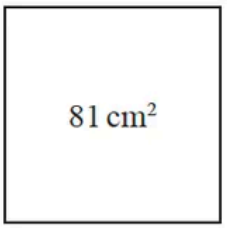
..... cm

(Total for Question 16 is 3 marks)

[Edexcel, GCSE, Summer 2019, Paper 3F, Q16]

12

A square has an area of 81 cm^2

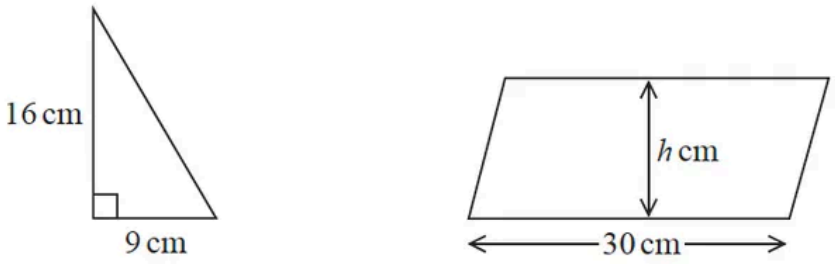


(a) Find the perimeter of the square.

..... cm

(2)

The diagram shows a right-angled triangle and a parallelogram.



The area of the parallelogram is 5 times the area of the triangle.
The perpendicular height of the parallelogram is h cm.

(b) Find the value of h.

h = ...

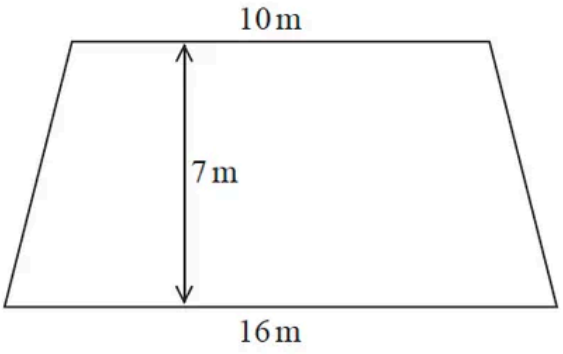
(3)

(Total for Question 13 is 5 marks)

[Edexcel, GCSE, Autumn 2018, Paper 2F, Q13]

13

The diagram shows a floor in the shape of a trapezium.





£16.99

John is going to paint the floor.

Each 5 litre tin of paint costs £16.99
1 litre of paint covers an area of 2 m^2

John has £160 to spend on paint.

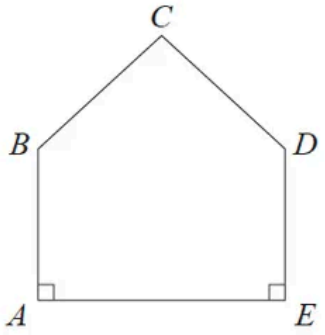
Has John got enough money to buy all the paint he needs?
You must show how you get your answer.

(Total for Question 24 is 5 marks)

[Edexcel, GCSE, Autumn 2018, Paper 2F, Q24]

14

The diagram shows a pentagon.
The pentagon has one line of symmetry.



$AE = 4x$
$AB = 2x + 1$
$BC = x + 2$

All these measurements are given in centimetres.

The perimeter of the pentagon is 18 cm.

(a) Show that $10x + 6 = 18$

(3)

(b) Find the value of x.

$x =$ .....

(2)

(Total for Question 17 is 5 marks)

[Edexcel, GCSE, Autumn 2018, Paper 3F, Q17]

15

The diagram shows a scale drawing of a tennis court.



The scale of the drawing is 1 : 200

Work out the perimeter of the real tennis court.
Give your answer in metres.

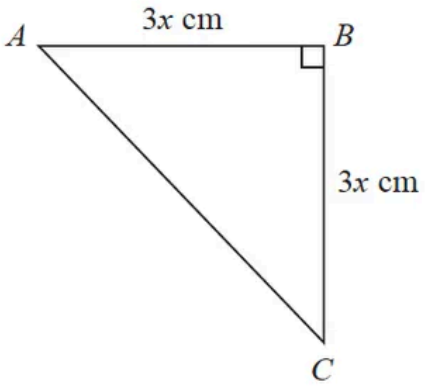
..... metres

(Total for Question 12 is 5 marks)

[Edexcel, GCSE, Summer 2018, Paper 3F, Q12]

16

ABC is an isosceles right-angled triangle.



The area of the triangle is $162\,\text{cm}^2$

Work out the value of x.

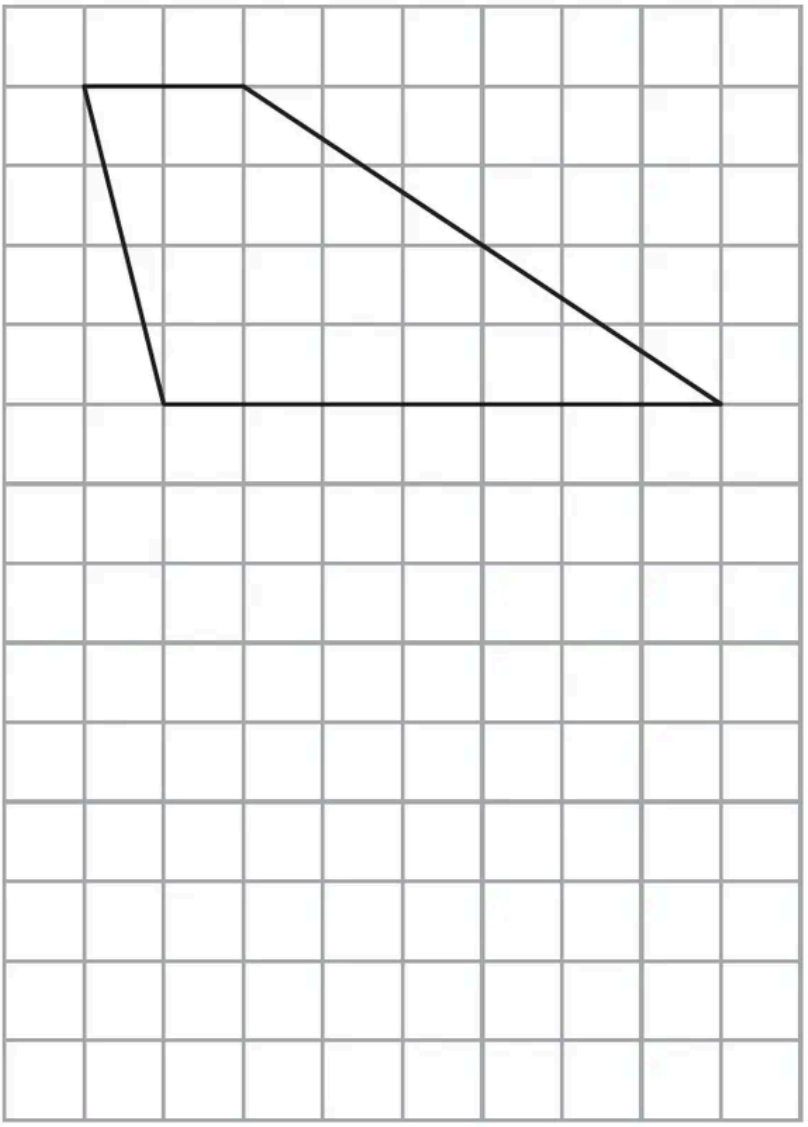
$x =$ .....

(Total for Question 17 is 3 marks)

[Edexcel, GCSE, Summer 2018, Paper 3F, Q17]

17

Here is a trapezium drawn on a centimetre grid.



On the grid, draw a triangle equal in area to this trapezium.

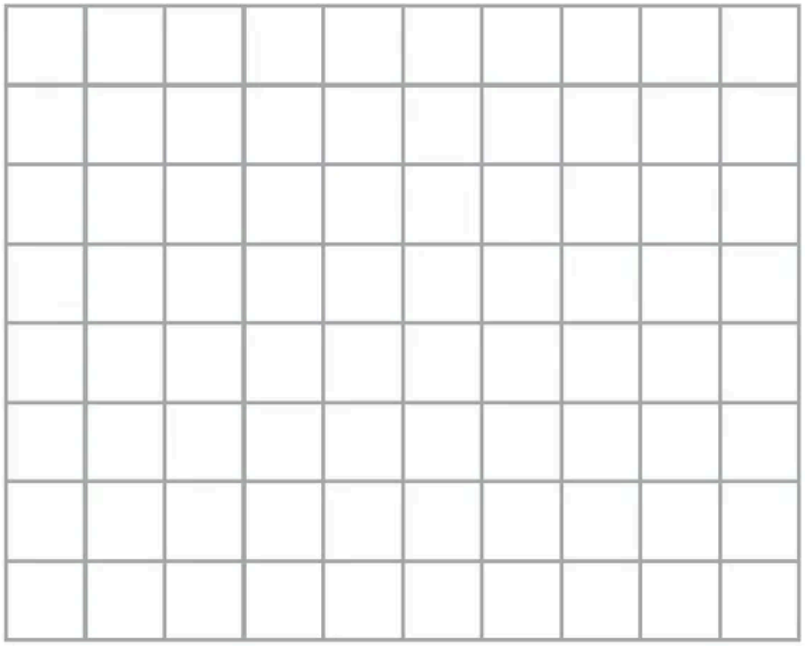
(Total for Question 21 is 2 marks)

[Edexcel, GCSE, Summer 2018, Paper 3F, Q21]

18

The length of a rectangle is twice as long as the width of the rectangle.
The area of the rectangle is 32 cm^2.

Draw the rectangle on the centimetre grid.

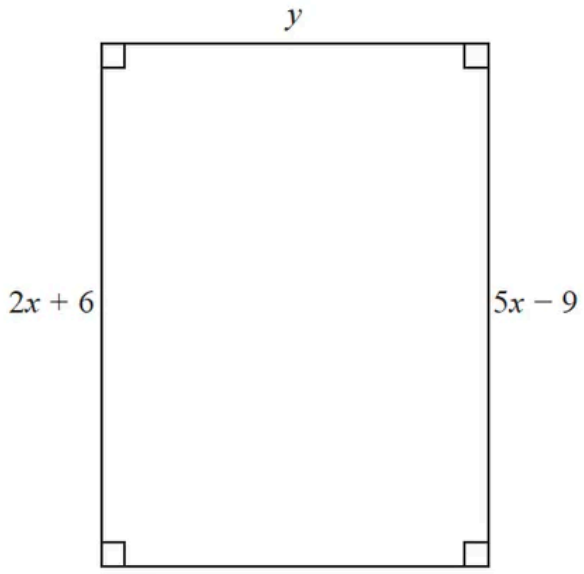


(Total for Question 8 is 2 marks)

[Edexcel, GCSE, Autumn 2017, Paper 1F, Q8]

19

Here is a rectangle.



All measurements are in centimetres.

The area of the rectangle is 48 cm^2.

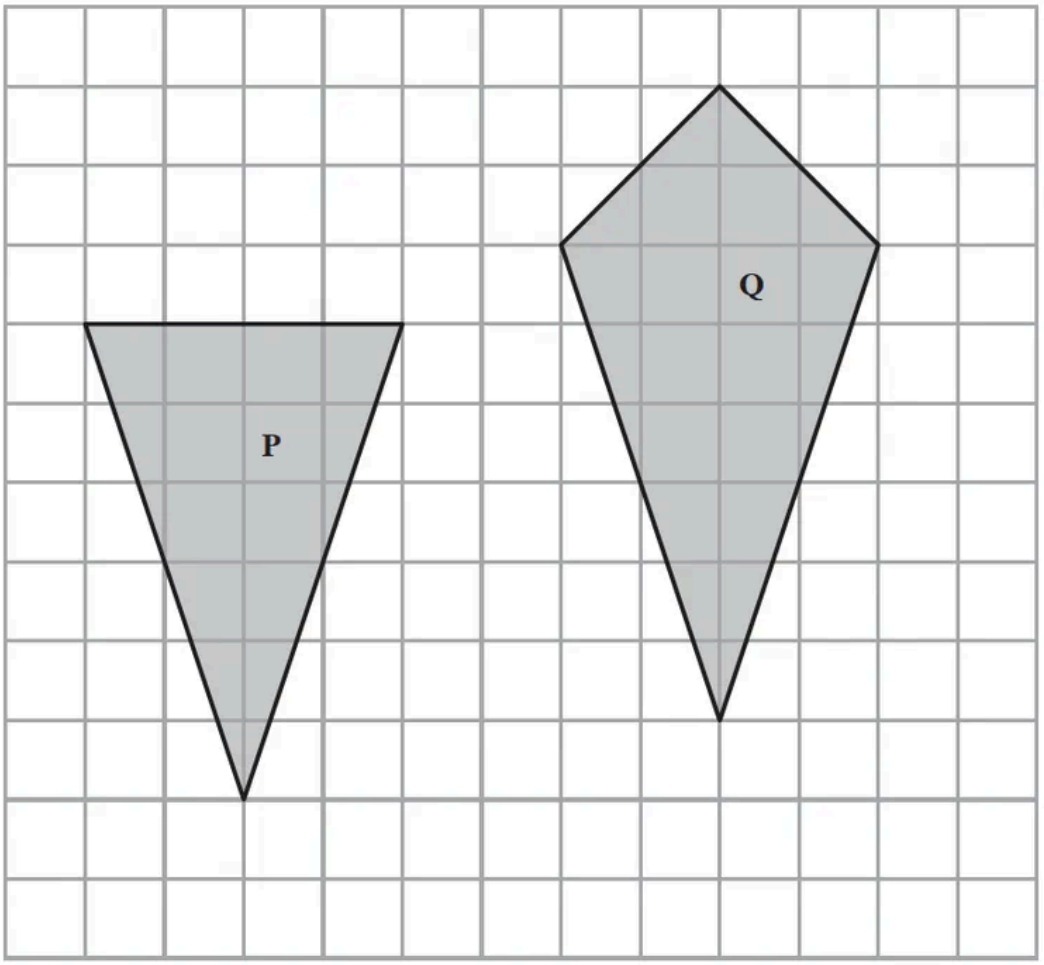
Show that $y = 3$

(Total for Question 28 is 4 marks)

[Edexcel, GCSE, Autumn 2017, Paper 1F, Q28]

20

The diagram shows two shapes drawn on a centimetre grid.



(a) Find the area of shape **P**.

.....

(2)

(b) Write down the mathematical name of quadrilateral **Q**.

.....

(1)

(Total for Question 10 is 3 marks)

[Edexcel, GCSE, Autumn 2017, Paper 2F, Q10]

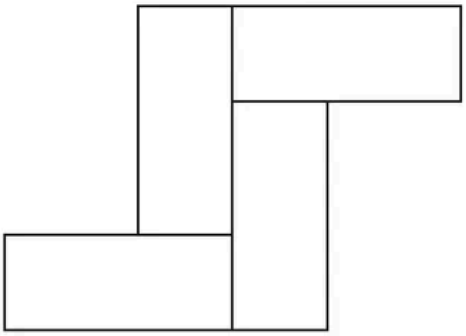
21

Here is a rectangle.



The length of the rectangle is 7 cm longer than the width of the rectangle.

4 of these rectangles are used to make this 8-sided shape.



The perimeter of the 8-sided shape is 70 cm.

Work out the area of the 8-sided shape.

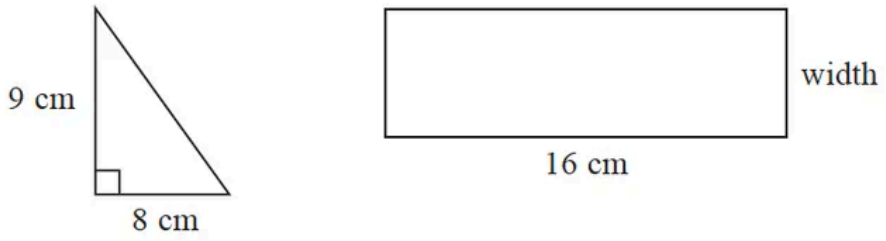
..... cm^2

(Total for Question 24 is 5 marks)

[Edexcel, GCSE, Autumn 2017, Paper 3F, Q24]

22

Here are a triangle and a rectangle.



The area of the rectangle is 6 times the area of the triangle.

Work out the width of the rectangle.

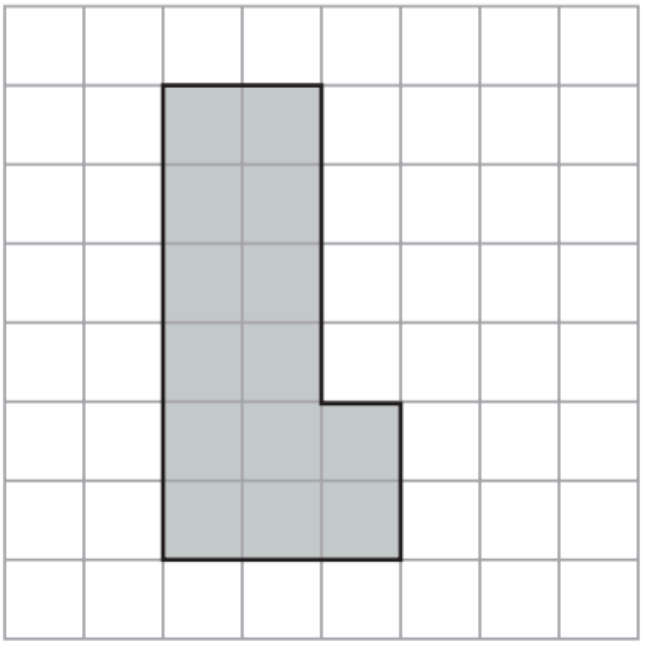
..... cm

(Total for Question 15 is 4 marks)

[Edexcel, GCSE, Summer 2017, Paper 1F, Q15]

23

The diagram shows a shape on a centimetre grid.



(a) Find the area of the shape.

..... cm^2

(1)

(b) Find the perimeter of the shape.

..... cm

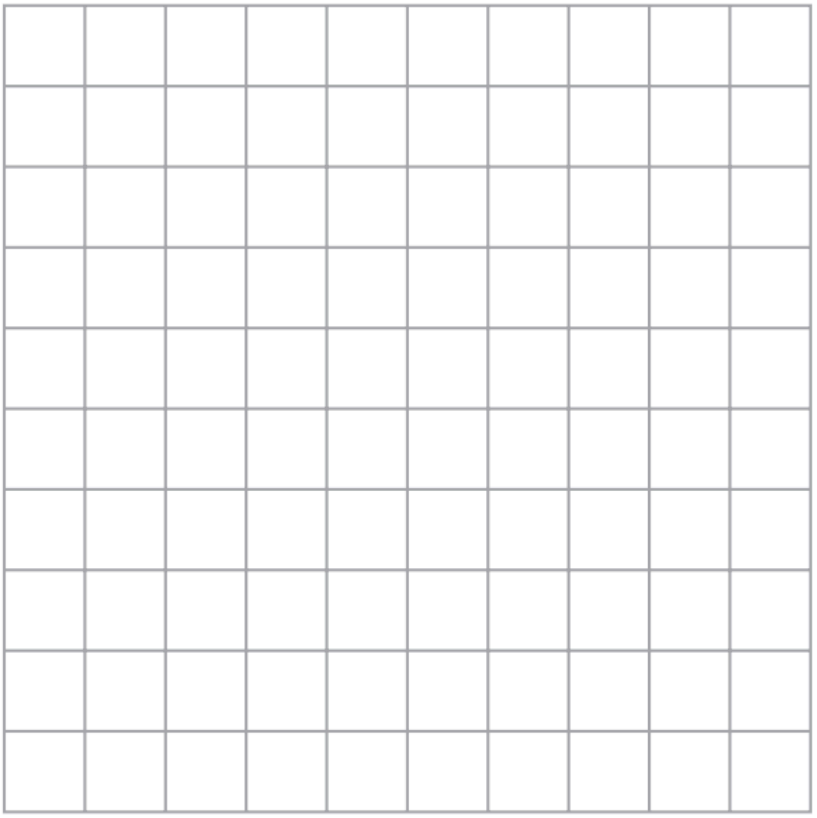
(1)

(Total for Question 6 is 2 marks)

[Edexcel, GCSE, Summer 2023, Paper 3F, Q6]

24

On the centimetre grid, draw an isosceles triangle with an area of $12\,cm^2$



(Total for Question 16 is 2 marks)

[Edexcel, GCSE, Summer 2022, Paper 3F, Q16]