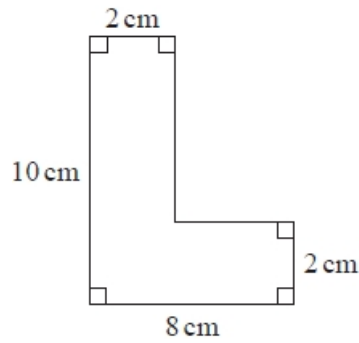


G074 Area and perimeter

Q1.



Work out the area of the shape.

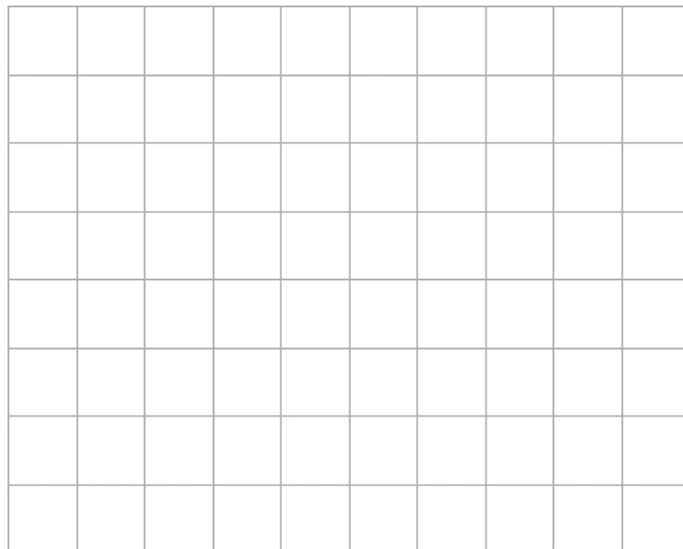
..... cm²

(Total for question is 2 marks)

Q2.

The length of a rectangle is twice as long as the width of the rectangle.
The area of the rectangle is 32 cm².

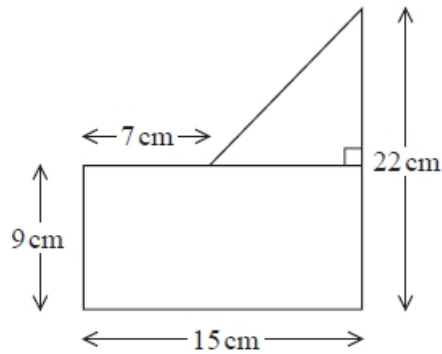
Draw the rectangle on the centimetre grid.



(Total for question = 2 marks)

Q3.

Here is a shape made from a rectangle and a triangle.



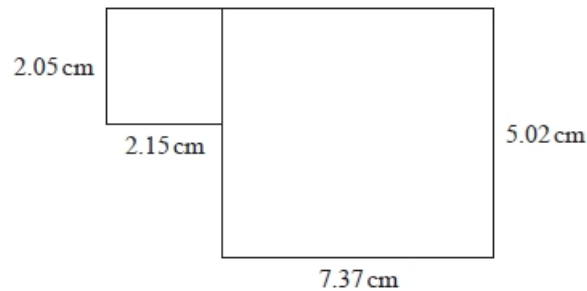
Work out the total area of the shape.

..... cm^2

(Total for question = 3 marks)

Q4.

This shape is made from two rectangles.



(a) Work out an estimate for the total area of the shape.

..... cm^2

(3)

(b) Is your answer to (a) an overestimate or an underestimate?

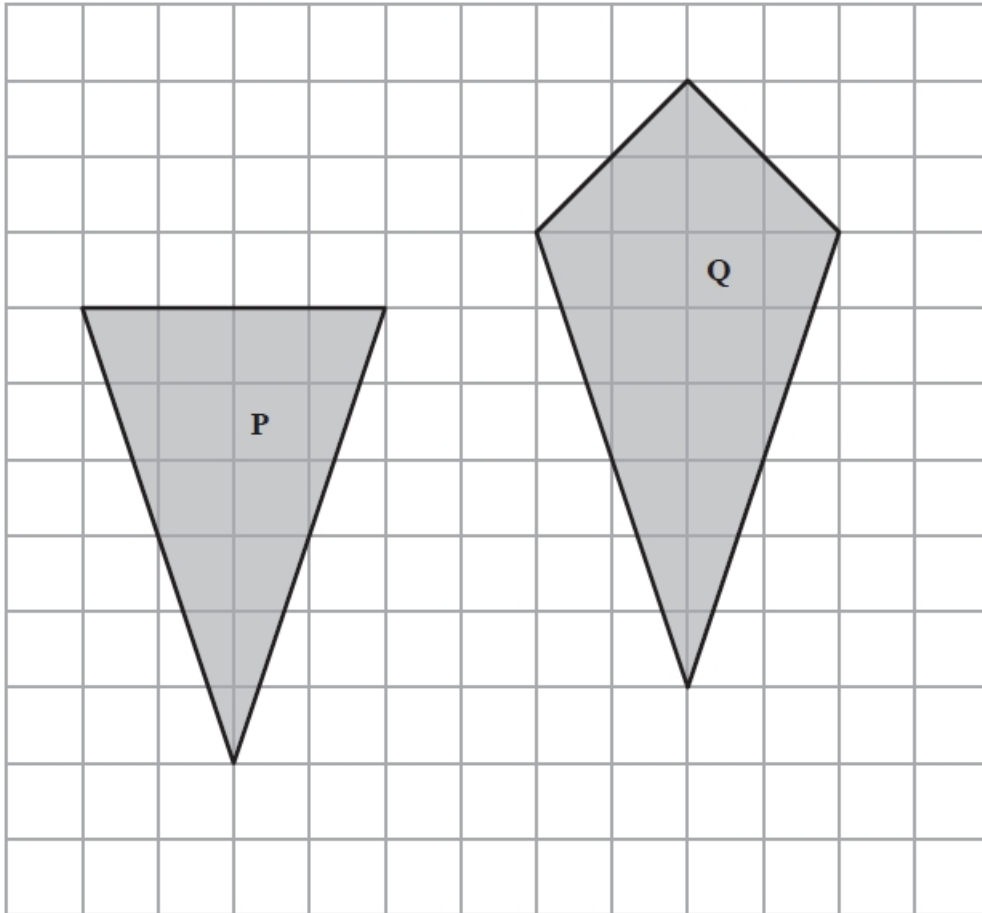
Give a reason for your answer.

(1)

(Total for question = 4 marks)

Q5.

The diagram shows two shapes drawn on a centimetre grid.



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

.....
(2)

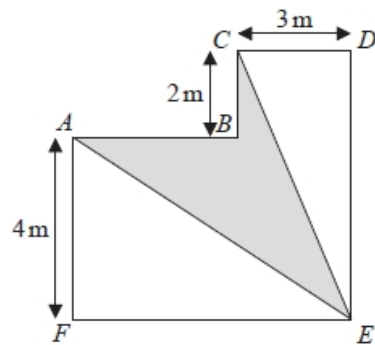
(b) Write down the mathematical name of quadrilateral **Q**.

.....
(1)

(Total for question = 3 marks)

Q6.

The diagram shows a shape $ABCDEF$.



All the corners of the shape are right angles.

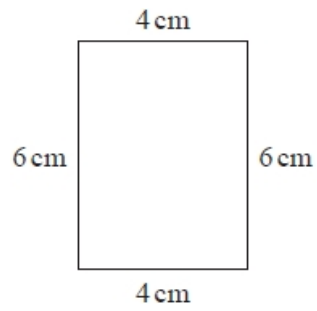
The perimeter of the shape is 28 m .

Work out the area of $ABCE$ shown shaded on the diagram.

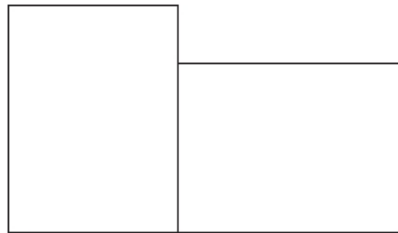
.....
(Total for question = 5 marks)

Q7.

Here is a rectangle.



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



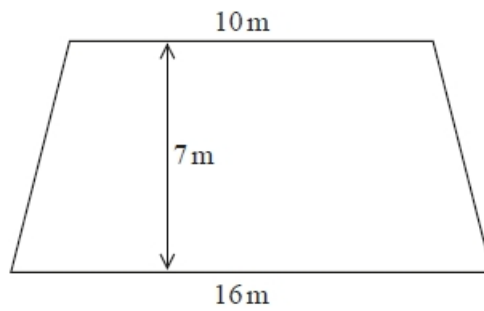
Work out the perimeter of this 6-sided shape.

..... cm

(Total for question = 3 marks)

Q8.

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



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.

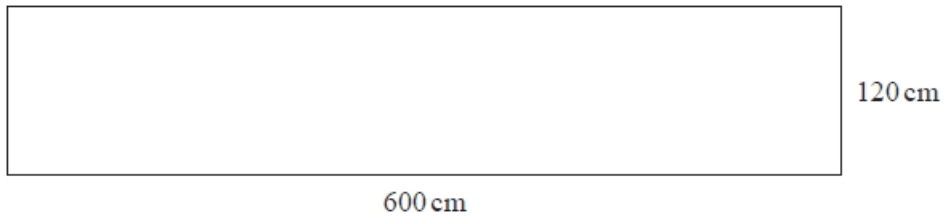
Has John got enough money to buy all the paint he needs?

You must show how you get your answer.

(Total for question = 5 marks)

Q9.

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

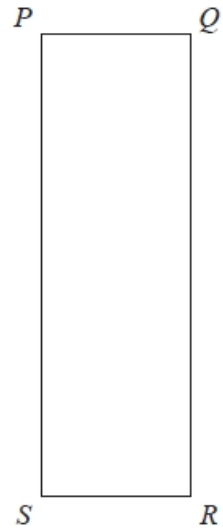
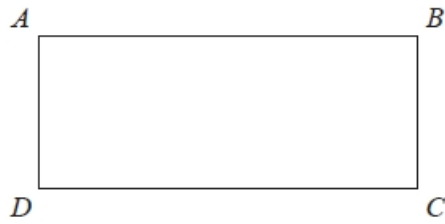
Wasim has £220 to spend on paving stones.

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

(Total for question = 4 marks)

Q10.

Here are two rectangles.



$QR = 10 \text{ cm}$

$BC = PQ$

The perimeter of $ABCD$ is 26 cm

The area of $PQRS$ is 45 cm^2

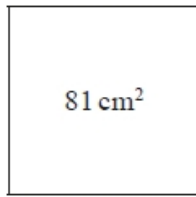
Find the length of AB .

..... cm

(Total for question = 4 marks)

Q11.

A square has an area of 81 cm^2

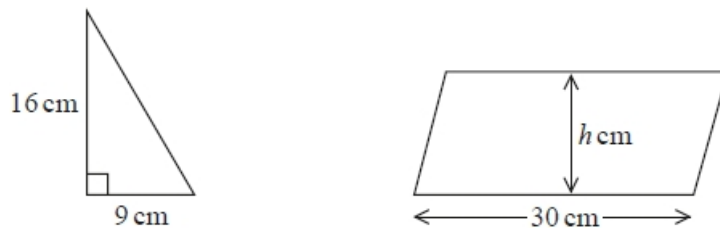


(a) Find the perimeter of the square.

..... 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 .

$h = \dots\dots\dots$

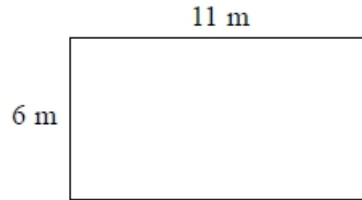
(3)

(Total for question = 5 marks)

Q12.

A tin of varnish costs £15

A rectangular floor has dimensions 6 m by 11 m.
The floor is going to be covered in varnish.



Helen assumes that each tin of this varnish covers an area of 12 m².

(a) Using Helen's assumption, work out the cost of buying the varnish for this floor.

£

(4)

Helen finds that each tin of varnish covers less than 12 m².

(b) Explain how this might affect the number of tins she needs to buy.

.....
.....

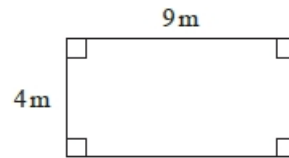
(1)

(Total for question = 5 marks)

Q13.

Shirley has a garage.

Here is a plan of her garage floor.



Shirley wants to buy enough paint to cover the garage floor as cheaply as possible. She can buy her paint from Decor U or from Paint Store.

<p>Decor U Floor paint</p> <p>£3.70 each tin 1 tin covers 12m²</p>
--

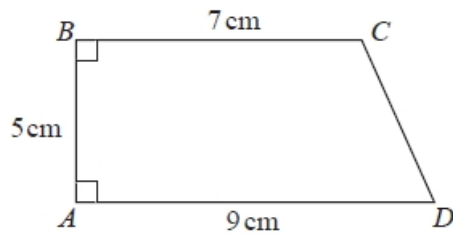
<p>Paint Store Floor paint</p> <p>£3.00 each tin 1 tin covers 10m²</p>
--

From which of these two shops should Shirley buy her paint?
You must show all your working.

(Total for question = 4 marks)

Q14.

$ABCD$ is a trapezium.



A square has the same perimeter as this trapezium.

Work out the area of the square.

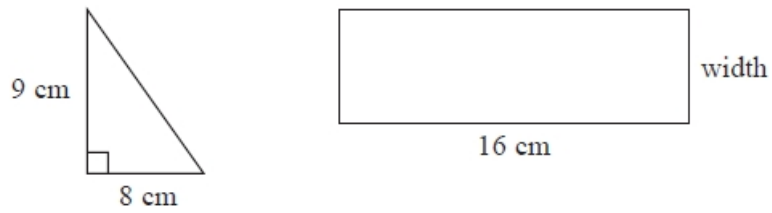
Give your answer correct to 3 significant figures.

..... cm^2

(Total for question is 5 marks)

Q15.

Here are a triangle and a rectangle.



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

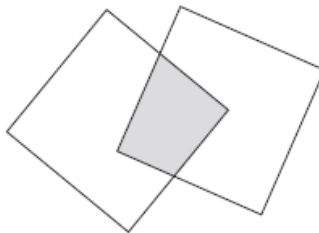
Work out the width of the rectangle.

..... cm

(Total for question = 4 marks)

Q16.

The diagram shows a shape made by overlapping two identical squares.



The area of the shaded region is 25% of the area of each square.

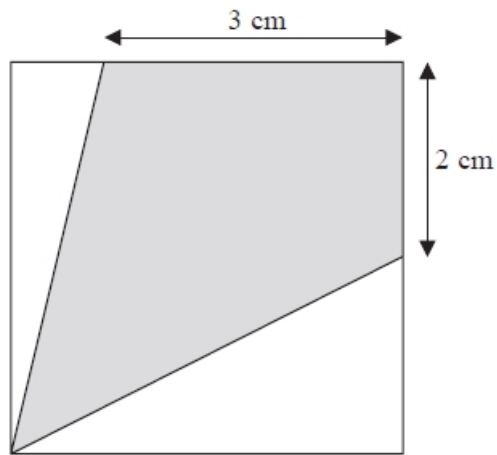
Work out what fraction of the area of the whole shape is shaded.

.....

(Total for question = 3 marks)

Q17.

The diagram shows a square with perimeter 16 cm.

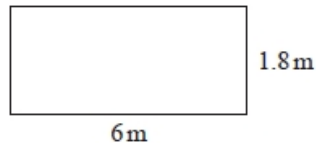


Work out the proportion of the area inside the square that is shaded.

.....
(Total for question = 5 marks)

Q18.

The diagram shows a rectangular wall.



Frank is going to cover the wall with rectangular tiles.
Each tile is 60 cm by 30 cm.

$\frac{3}{5}$ of the tiles will be white.

Some of the tiles will be green.
The rest of the tiles will be blue.

The ratio of the number of green tiles to the number of blue tiles will be 1 : 3

(a) Assuming there are no gaps between the tiles, how many tiles of each colour will Frank need?

white tiles
green tiles
blue tiles

(5)

Frank is told that he should leave gaps between the tiles.

(b) If Frank leaves gaps between the tiles, how could this affect the number of tiles he needs?

.....
.....

(1)

(Total for question = 6 marks)