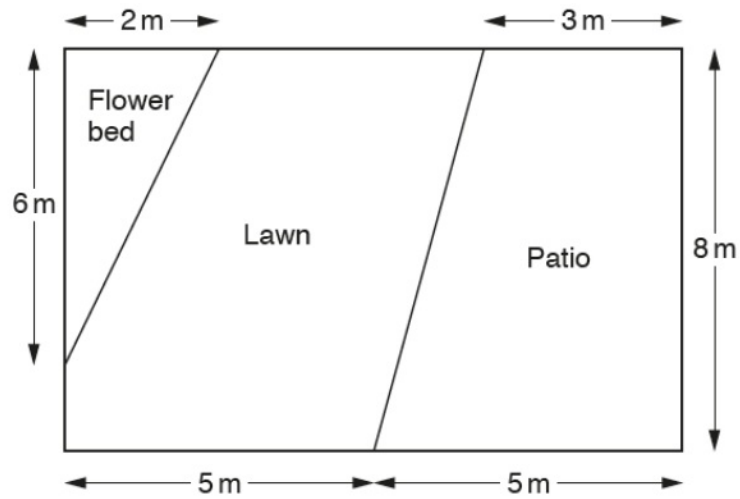


G20 Area-Compound Shapes

OCR

- 9 The diagram represents a rectangular garden of length 10 m and width 8 m.
The flower bed is a triangle and the patio is a trapezium.
The rest of the garden is lawn.

Created by W Neill

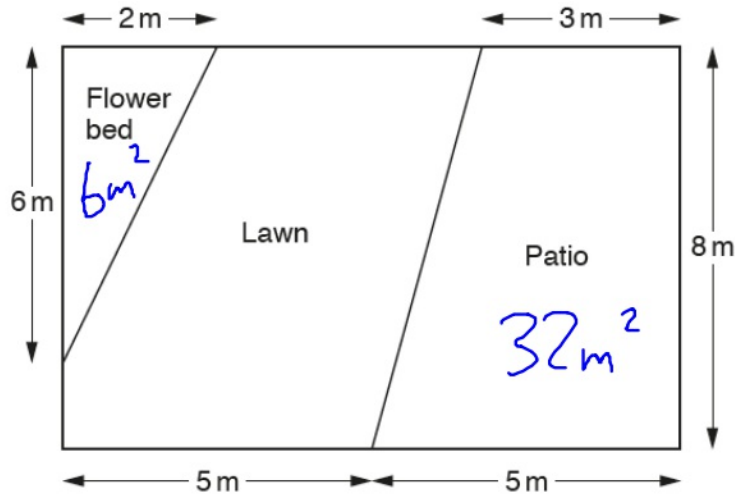


Not to scale

Work out the area of the lawn.

..... m² [6]

- 9 The diagram represents a rectangular garden of length 10 m and width 8 m.
The flower bed is a triangle and the patio is a trapezium.
The rest of the garden is lawn.



Work out the area of the lawn.

full garden $10 \times 8 = 80 \text{ m}^2$

Flower bed $\frac{B \times H}{2} = \frac{2 \times 6}{2} = 6 \text{ m}^2$

Patio

The diagram shows a trapezium with a top base of 3 m, a bottom base of 5 m, and a height of 8 m. The area is calculated as $\frac{1}{2}(a+b)h = \frac{1}{2}(8)(8) = 32 \text{ m}^2$.

$FB + \text{Patio} = 38 \text{ m}^2 \checkmark$

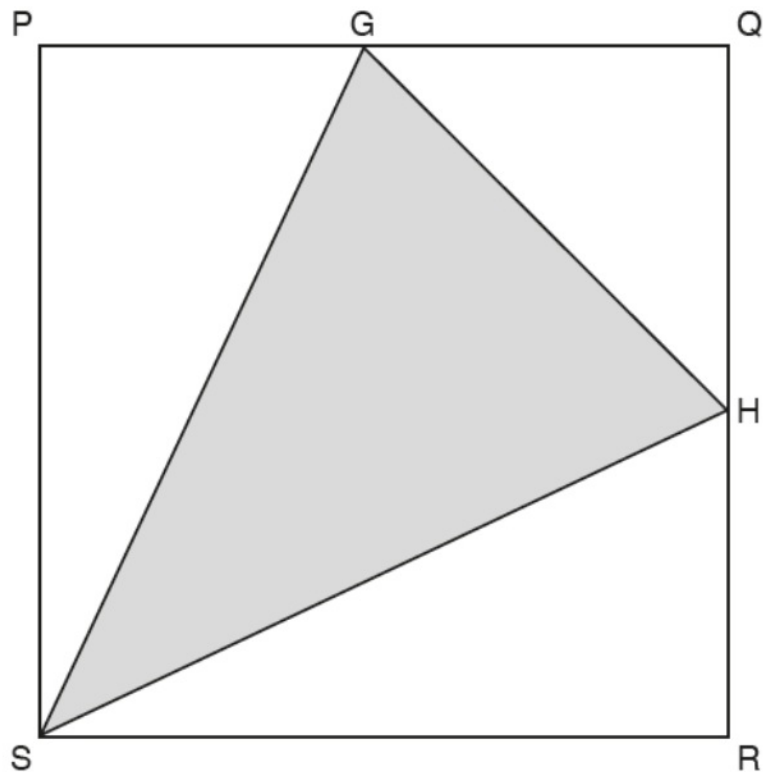
$\text{Lawn} = 80 \text{ m}^2 - 38 \text{ m}^2$

$42 \text{ m}^2 \checkmark$

..... m² [6]

- 17 PQRS is a square.
G is the midpoint of PQ and H is the midpoint of QR.
Triangle GHS is shaded.

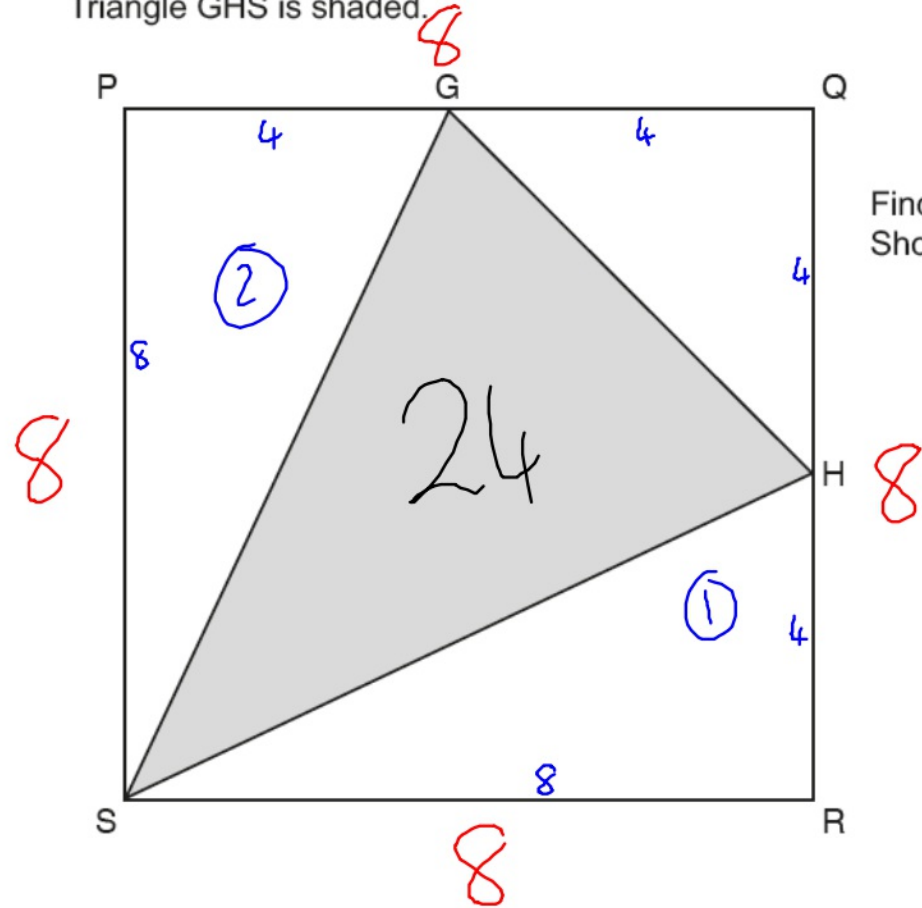
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Find the ratio shaded area : area of square in its simplest form.
Show all your working.

..... : [4]

- 17 PQRS is a square.
 G is the midpoint of PQ and H is the midpoint of QR.
 Triangle GHS is shaded.



Created by

Atbach numbers

$$24 = 64 - 40 =$$

Grey = Full - White

Find the ratio shaded area : area of square in its simplest form.
 Show all your working.

$$\text{Full square} = 8 \times 8 = 64 \text{ cm}^2$$

$$\text{Triangle Area} = \frac{B \times H}{2} \dots \textcircled{1} \frac{8 \times 4}{2} = 16 \text{ cm}^2$$

$$\textcircled{1} \rightarrow 16 \text{ cm}^2$$

$$\textcircled{2} \rightarrow 16 \text{ cm}^2$$

$$\textcircled{3} \rightarrow 8 \text{ cm}^2$$

$$24 : 64$$

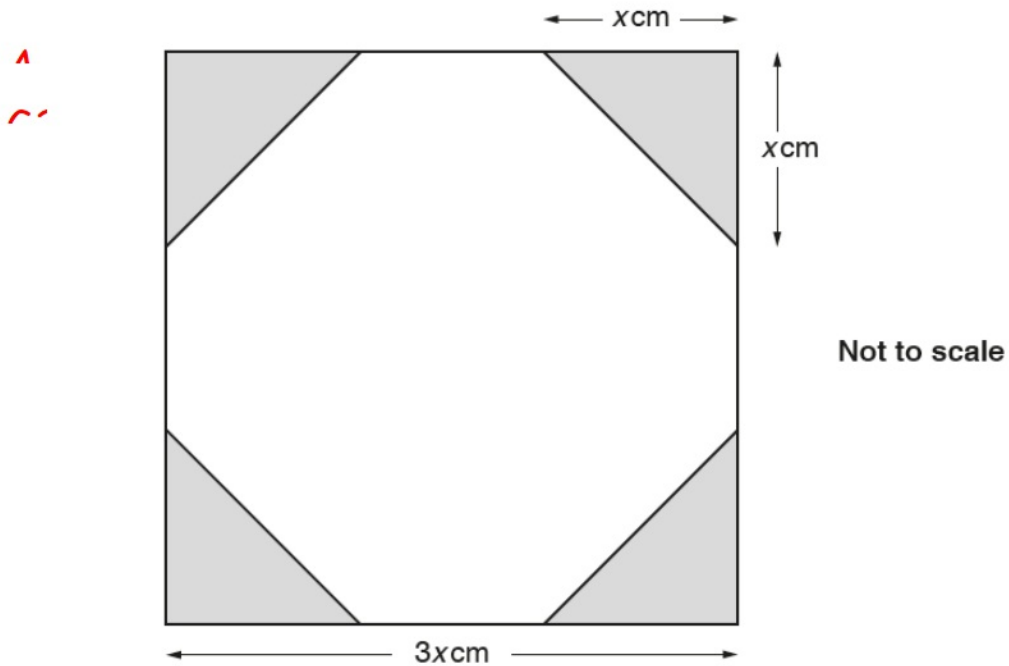
$$3 : 8$$

$$\text{white} = 40 \text{ cm}^2$$

[4]

25 The diagram shows a square with four identical corners shaded.

Video content



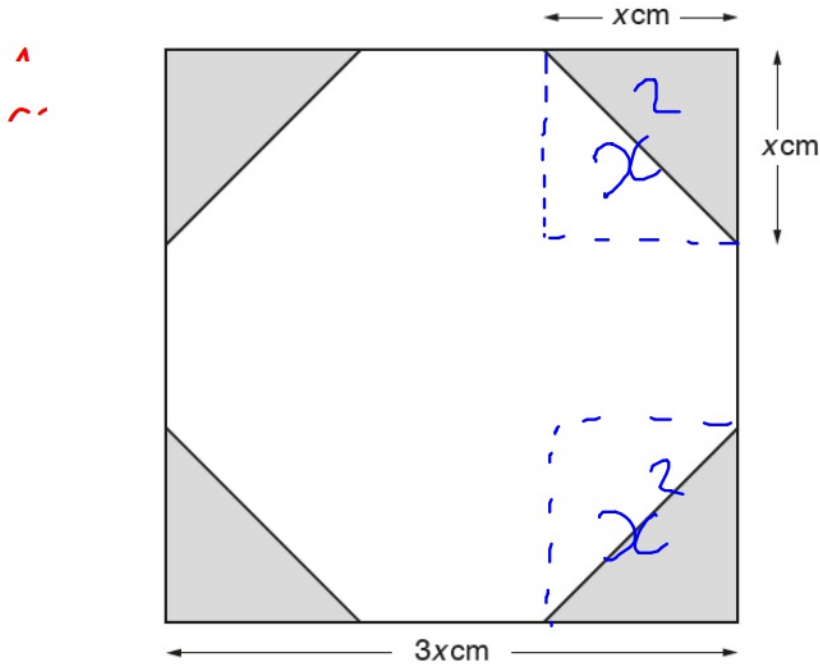
The length of each side of the square is $3x$ cm.
The length of each shaded corner is x cm.

Use this information to show that $\frac{\text{shaded area}}{\text{unshaded area}} = \frac{2}{7}$.

Show all your working.

[5]

25 The diagram shows a square with four identical corners shaded.



Not to scale

shaded ... full - white
 white = full - grey
 full = $3x \times 3x = 9x^2$
 grey = $x^2 \times 2 = 2x^2$

white ... $9x^2 - 2x^2 = 7x^2$

$$\frac{\cancel{2x^2}}{\cancel{7x^2}} = \frac{2}{7} \checkmark$$

The length of each side of the square is $3x$ cm.
 The length of each shaded corner is x cm.

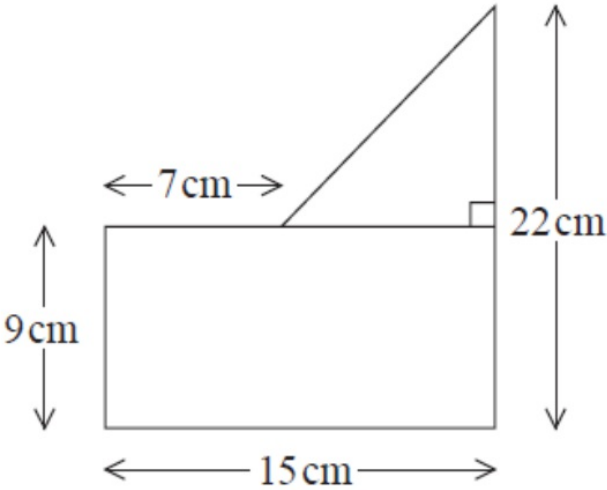
Use this information to show that $\frac{\text{shaded area}}{\text{unshaded area}} = \frac{2}{7}$.

Show all your working.

[5]

Edexcel

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

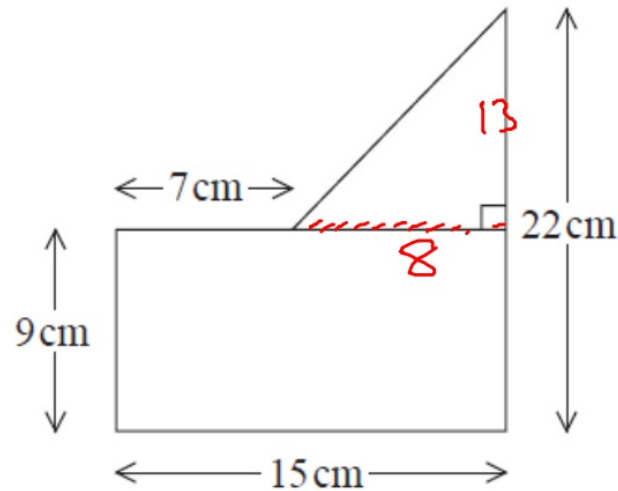


Work out the total area of the shape.

.....cm²

(Total for Question 13 is 3 marks)

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



Work out the total area of the shape.

$$\begin{aligned} \text{Rect... } 15\text{cm} \times 9\text{cm} \\ = 135\text{cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Triangle } \frac{B \times H}{2} &= \frac{8 \times 13}{2} \\ &= 52\text{cm}^2 \end{aligned}$$

$$\dots\dots\dots 187 \text{ cm}^2$$

(Total for Question 13 is 3 marks)

AQA