

2 The diagram shows a patio in the shape of a rectangle.

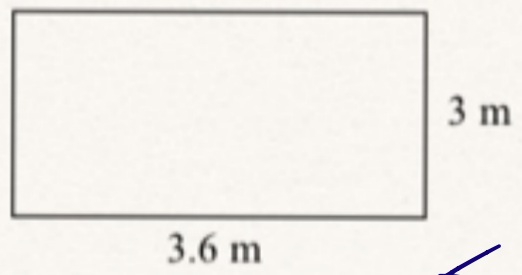


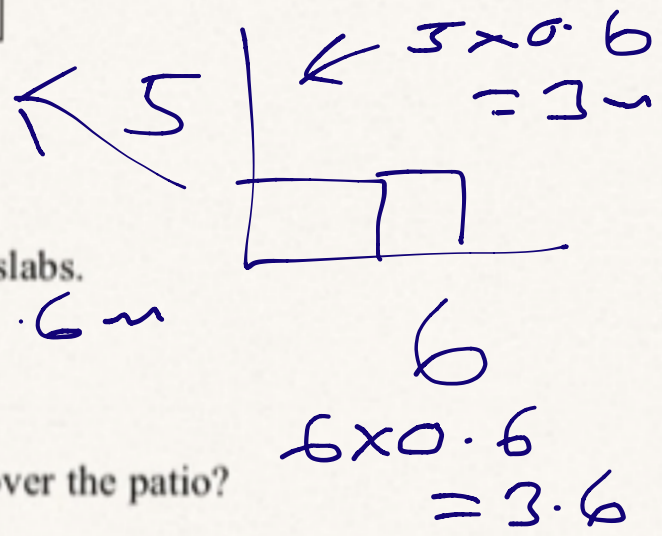
Diagram NOT accurately drawn

The patio is 3.6 m long and 3 m wide.

Matthew is going to cover the patio with paving slabs. Each paving slab is a square of side 60 cm.

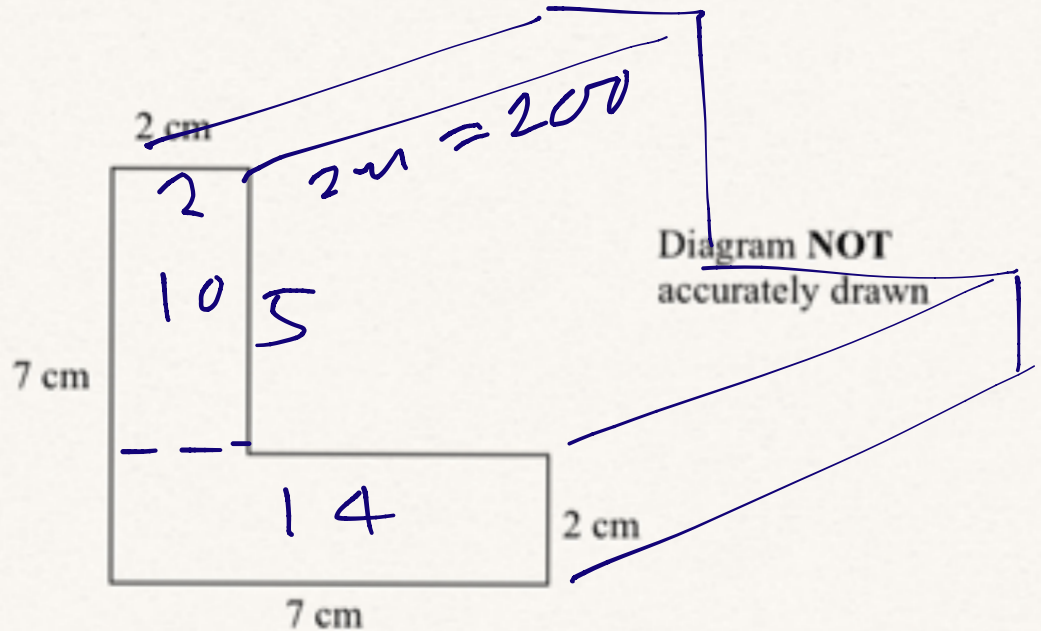
Matthew buys 32 of the paving slabs.

(a) Does Matthew buy enough paving slabs to cover the patio? You must show all your working.



30 needed so yes.

10.



The diagram shows the cross-section of a solid prism.

The length of the prism is 2 m.

The prism is made from metal.

The density of the metal is 8 grams per  $\text{cm}^3$ .

Work out the mass of the prism.

$$\begin{aligned}V &= 24 \times 200 \\ &= 4800 \text{ cm}^3 \\ 4800 \times 8 \\ &= 38400 \text{ g}\end{aligned}$$

7.

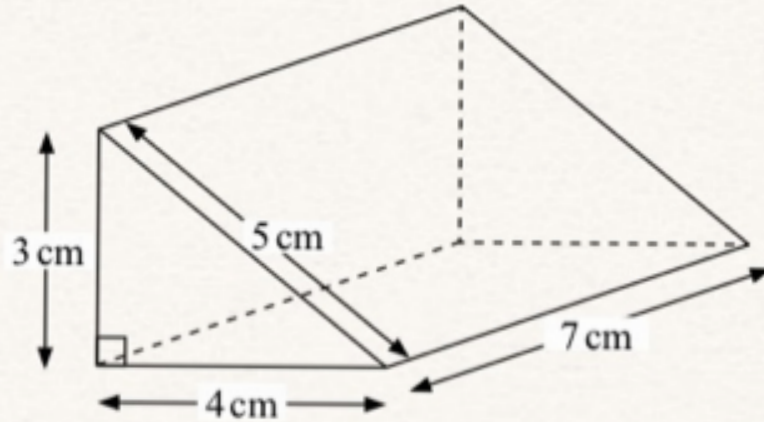


Diagram **NOT**  
accurately drawn

Work out the total surface area of the triangular prism.  
Give the units with your answer.

$$\begin{aligned} 2 \text{ Triangles} &= 2 \times \frac{1}{2} \times 3 \times 4 = 12 \\ 3 \text{ Rectangles} & \quad 7 \times 3 = 21 \\ & \quad 7 \times 4 = 28 \\ & \quad 7 \times 5 = 35 \\ 84 + 12 &= 96 \end{aligned}$$

9.

$\text{cm}^2$  84

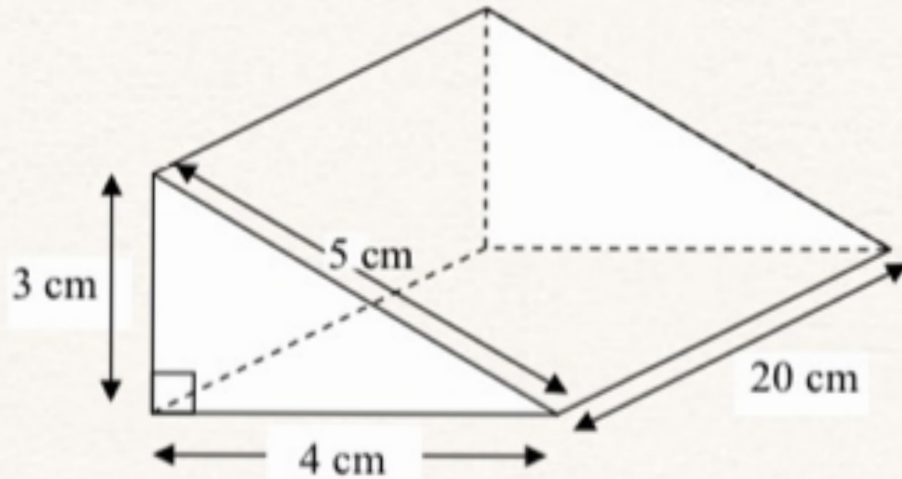


Diagram NOT accurately drawn

Work out the volume of the triangular prism.

$$V = \left( \frac{1}{2} \times 3 \times 4 \right) \times 20$$
$$6 \times 20 = 120 \text{ cm}^3$$

9.

120  
 150  
 80  
 170  


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 520

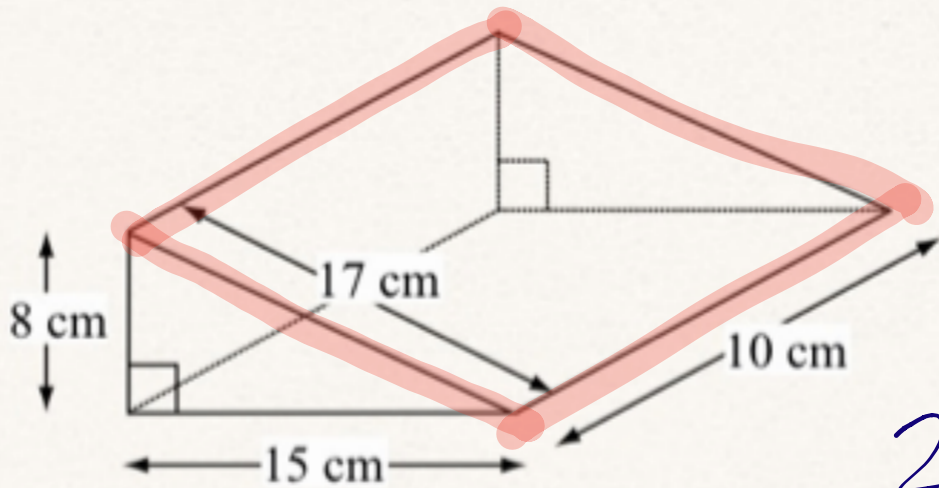


Diagram NOT accurately drawn

2 (triangles)

Work out the **total** surface area of the triangular prism.

(2)

$$2 \times \frac{1}{2} \times 8 \times 15 = 120$$

$$(10 \times 15) + (8 \times 10) + (10 \times 17)$$

150
80
170

3

$$\sqrt{25^2 - 7^2} = 24$$

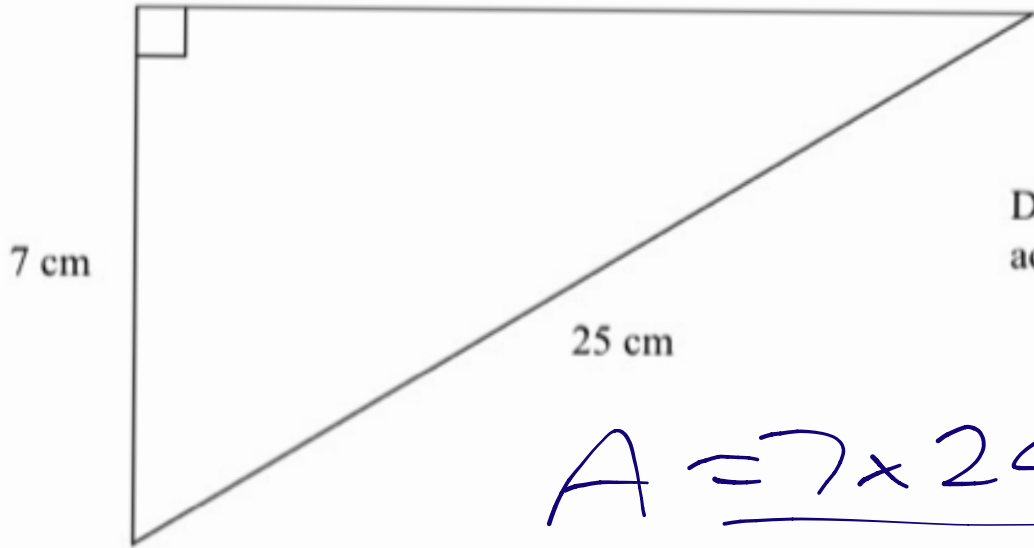


Diagram NOT accurately drawn

Calculate the area of this right-angled triangle.

$$A = \frac{7 \times 24}{2}$$

$$7 \times 12 = 84$$



12.

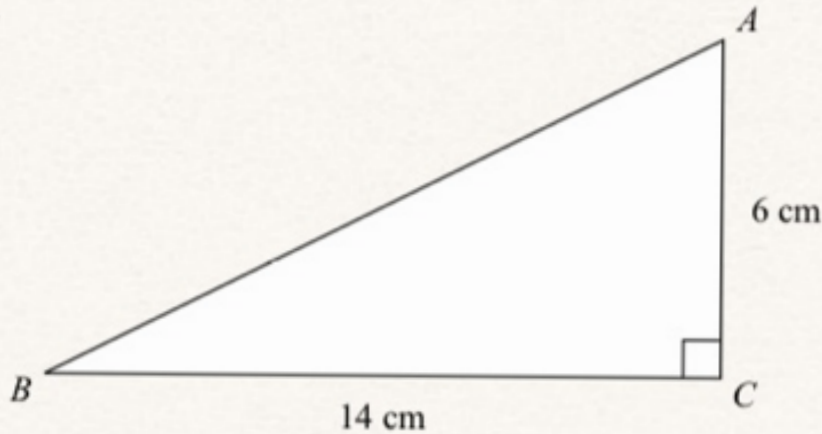


Diagram **NOT**  
accurately drawn

$ABC$  is a right-angled triangle.

$AC = 6$  cm.

$BC = 14$  cm.

(a) Work out the area of triangle  $ABC$ .

$$\frac{1}{2} \times 14 \times 6 = 42 \text{ cm}^2$$

..... cm<sup>2</sup>

(2)

1.

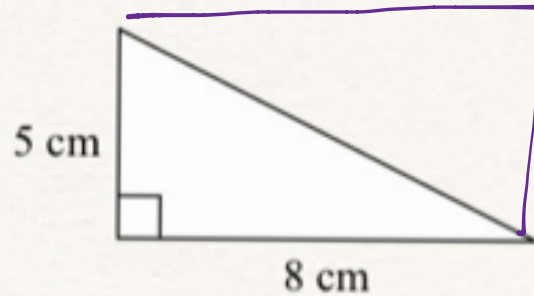


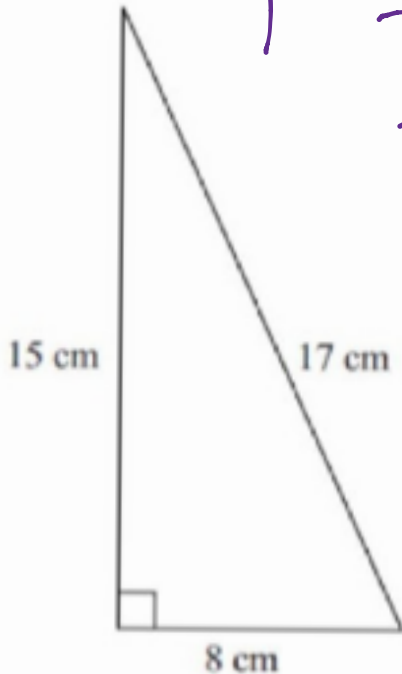
Diagram **NOT**  
accurately drawn

Work out the area of this right-angled triangle.

$$A = \frac{1}{2} \times 5 \times 8$$
$$4 \times 5 = 20$$



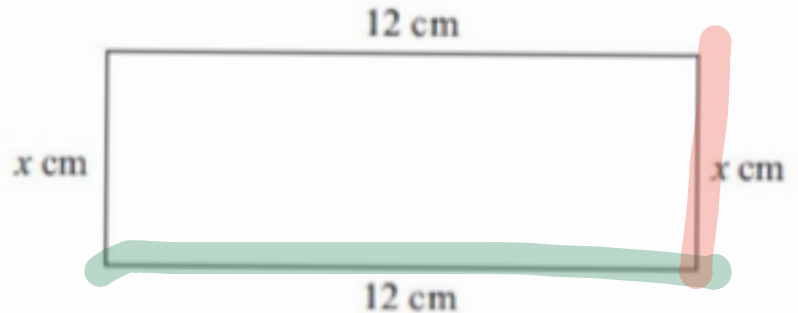
7. The diagrams show a right-angled triangle and a rectangle.



$$T = \frac{1}{2} \times 8 \times 15$$
$$= 60 \text{ cm}^2$$

Diagrams NOT accurately drawn

$$60 = 12x$$
$$x = 5$$



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

Find the value of  $x$ .



The image shows a handwritten mathematical equation in purple ink:  $6 \times (4 + 5 + 7) = 96$ . Above the number 4, there are two horizontal orange lines. A small number '4' is written below the first orange line. An 'x' is written above the number 5, with a diagonal arrow pointing from the 'x' down to the 5.

$$6 \times (4 + 5 + 7) = 96$$