



Starter

What is length of each side of a square with an area of 16m^2 ?

How many cm^2 in 1m^2 ?

Top Tips!

Learn the formulas for basic shapes (label the sides/height yourself)



$$A = l \times w$$

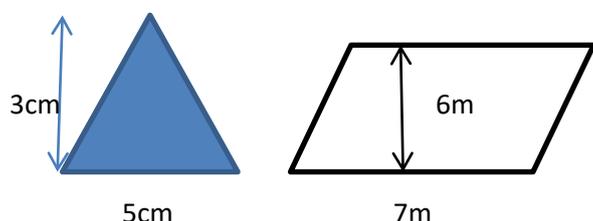
$$A = \frac{b \times h}{2}$$

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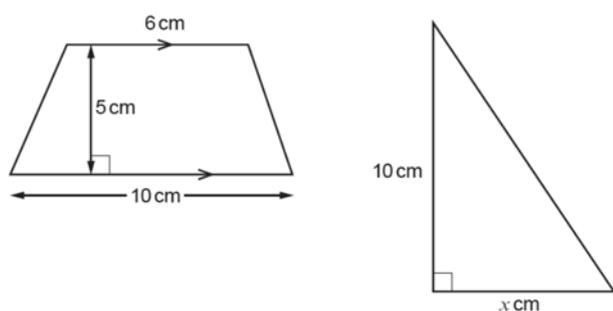
$$A = \left(\frac{a + b}{2}\right) \times h$$

Skills:

1. Calculate the area of the following shapes;



2. The area of the trapezium is equal to the area of the right angle triangle (*Diagrams not drawn to scale*)



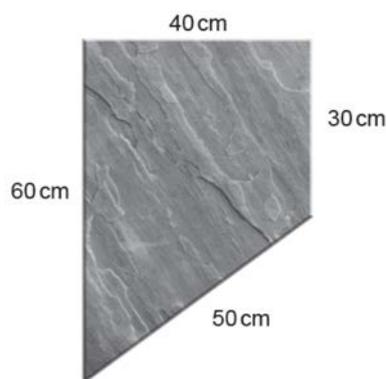
Calculate the value of x

Examination Question:

2014 January Link - Applications U1 Higher Qu 6

Tom is making a patio using paving slabs like the one shown below.

Each paving slab is in the shape of a trapezium.



Tom used 25 of these paving slabs to make his patio. He decides to paint the patio with a sealant to prevent staining.

Each tin of sealant that he buys covers an area of 0.8m^2 .

Each tin of sealant costs £14.49.

Each paving slab costs £8.25.

Tom buys just enough tins of sealant to paint his patio. Calculate the total cost of buying the paving slabs and sealant. You must show all your working.

Assessment for Learning

Video / QR code



Starter

What is length of each side of a square with an area of $16m^2$? **4cm**

How many cm^2 in $1m^2$? **$10000cm^2$**

Top Tips!

Learn the formulas for basic shapes (label the sides/height yourself)



$$A = l \times w$$

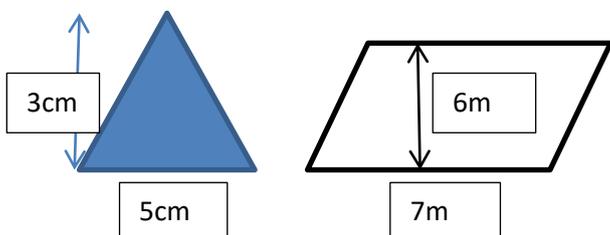
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$$A = \left(\frac{a+b}{2}\right) \times h$$

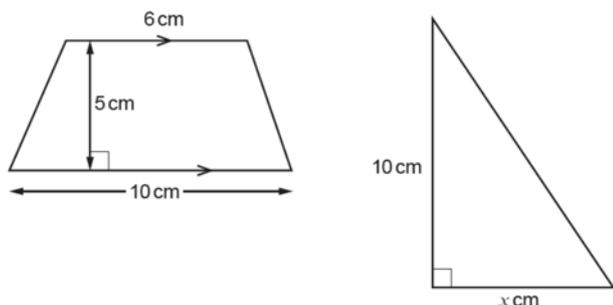
Skills:

2. Calculate the area of the following shapes;



$$A = \frac{3 \times 5}{2} = \frac{15}{2} = 7.5cm^2 \quad A = 7 \times 6 = 42m^2$$

3. The area of the trapezium is equal to the area of the right angle triangle (*Diagrams not drawn to scale*)



Calculate the value of x

$$A \text{ Trapezium} = \left(\frac{6+10}{2}\right) \times 5 = 8 \times 5 = 40cm^2$$

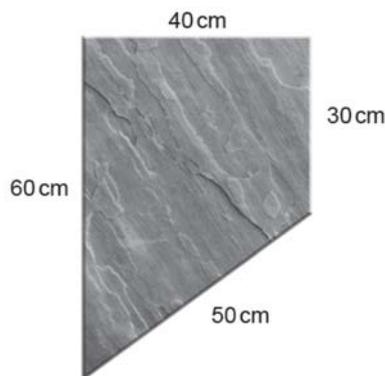
$$40 = \frac{10 \times x}{2}, \quad 40 \times 2 = 10x, \quad 80 = 10x, \quad x = 8cm$$

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$$A \text{ Trapezium} = \left(\frac{30+60}{2}\right) \times 40 = 45 \times 40 = 1800cm^2$$

$$1800 \div 10000 = 0.18 m^2$$

$$0.18 \times 25 = 4.5m^2 \text{ (area of 25 slabs)}$$

$$4.5 \div 0.8 = 5.625, \text{ 6 tins.}$$

$$6 \times £14.49 = £86.94 \text{ (cost of 6 tins)}$$

$$25 \times £8.25 = £206.25 \text{ (cost of 25 paving slabs)}$$

$$£86.94 + £206.25 = \mathbf{£293.19}$$

