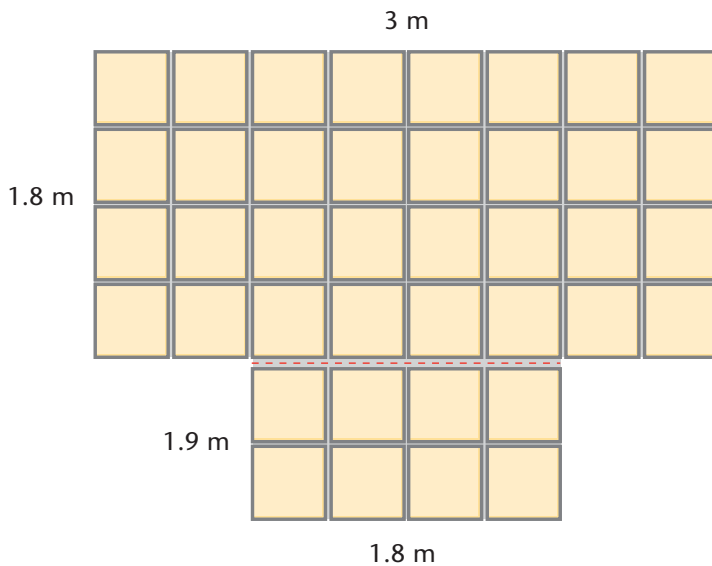


Painting the town!

Most patios are square or rectangular.
But sometimes my customers want patios that are different shapes.

Activity 13



Remember

Finding the area of a complicated shape

Break down a complicated shape into simple shapes like rectangles and triangles. Then work out the area of these shapes.

This patio is not a simple rectangle, so John splits it into two rectangles to work out the area.

- Area of the large rectangle = $3 \text{ m} \times 1.8 \text{ m} = 5.4 \text{ m}^2$
Area of the smaller rectangle = $1.8 \text{ m} \times 0.9 \text{ m} = 1.62 \text{ m}^2$

Total area of the patio = $5.4 \text{ m}^2 + 1.62 \text{ m}^2 = \boxed{} \text{ m}^2$

- Another patio was built round the corner of the house. It looked like the shape on the right.

Work out the area of the patio.

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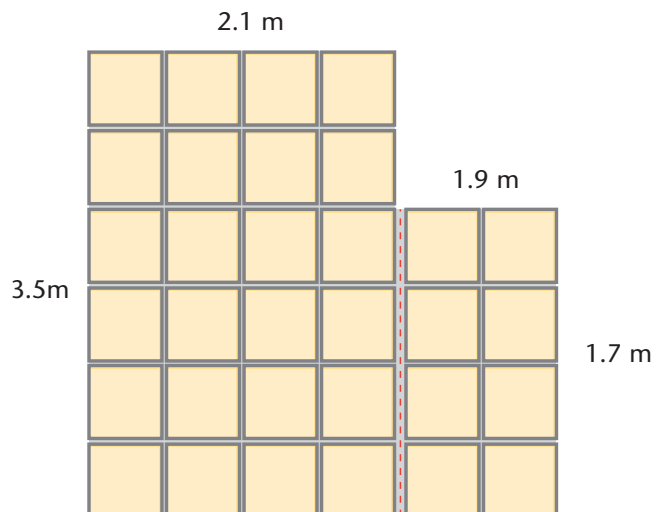
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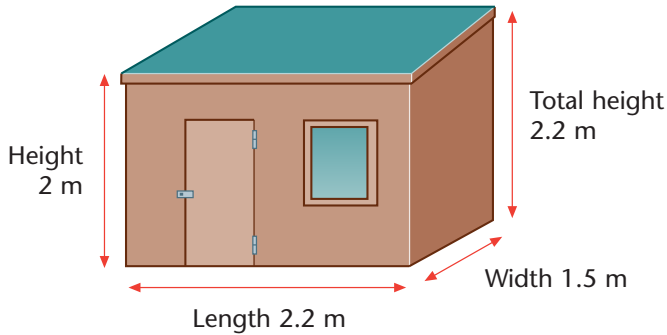


I have to paint sheds for my customers. Some paints are very expensive. I have to work out the total area to be painted, to make sure there isn't a lot left over.

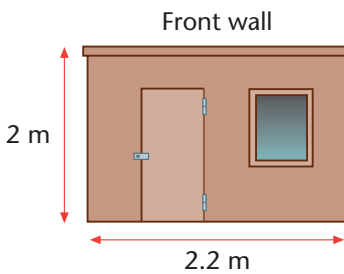
A shed is not a simple shape but you can work out the areas one side at a time. A 3-D diagram usually helps.

Activity 14

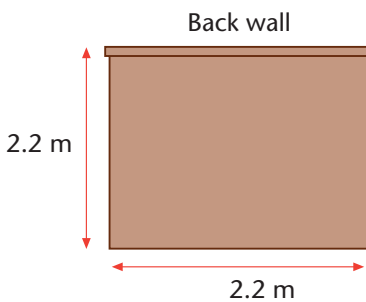
Garden shed



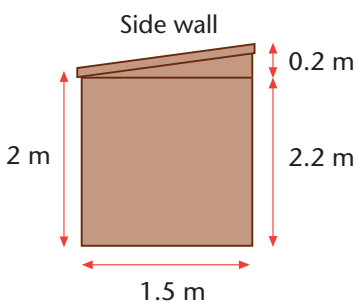
I have sketched out each wall separately to work out its area.



Area = \times = m^2



Area = \times = m^2



Area of triangle = $\times \frac{1}{2}$ \times = m^2

Area of rectangle = \times = m^2

Area of one side = + = m^2

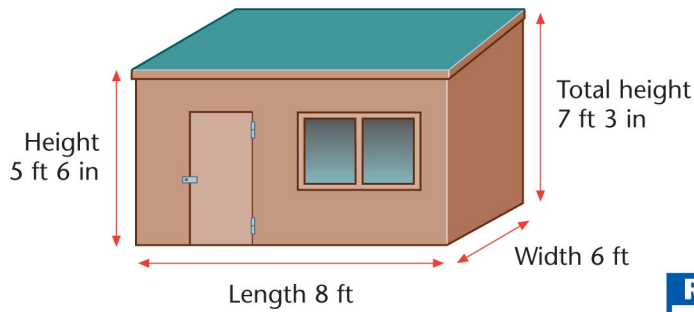
Area of two sides (both sides are the same) = m^2

Total surface area of the shed is = m^2

1 litre covers 12 m^2 so John needs $\div 12 =$ litres of paint.

Activity 15

This is an old shed. The customer gave the measurements to John over the phone in feet and inches.



1 Change each of the measurements to metres.

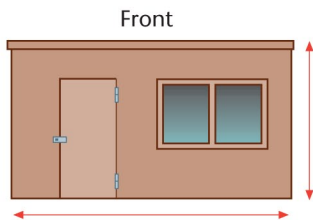
6 ft = mm = m

8 ft = mm = m

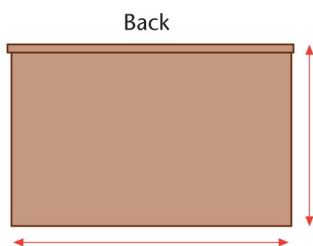
5 ft 6 in mm = m

7 ft 3 in mm = m

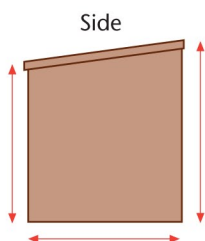
2 Mark the lengths in metres on the diagrams and work out the total surface area of the shed. Give your answer to one decimal place.



Area = m²



Area = m²



Area of triangle = m²

Area of rectangle = m²

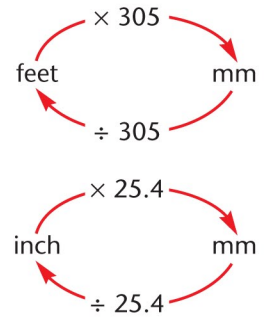
Area of one side = m²

Area of 2 sides = m²

Total area = m²

Remember

To change between the units



Imperial to metric

1 foot = 305 mm

1 inch = 25.4 mm