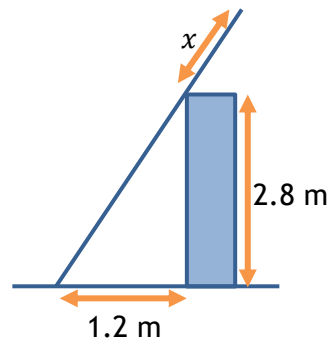
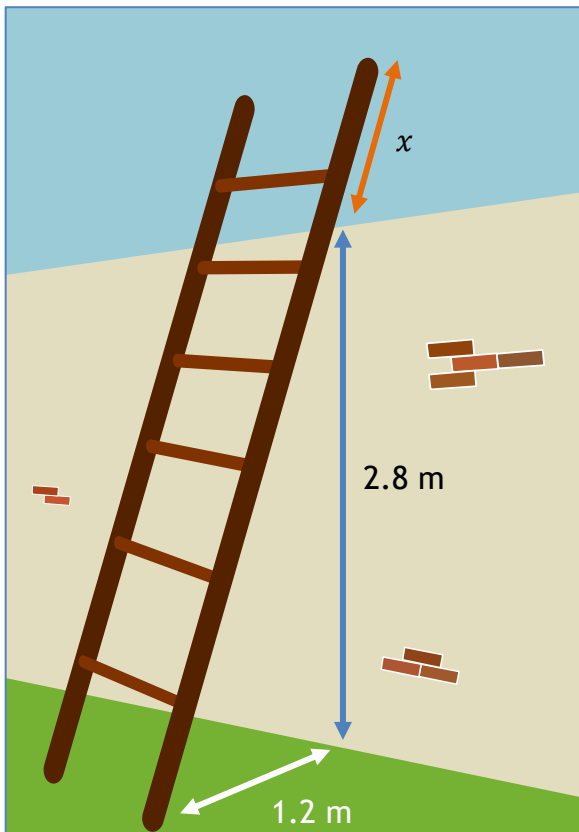


Blue card sort



1. A ladder of length 4 metres leans against a wall that is 2.8 metres high.

The foot of the ladder is 1.2 metres from the base of the wall.

The length of the ladder above the wall is marked x in the diagram.

Not drawn accurately.

Work out the value of x .

[3 marks]

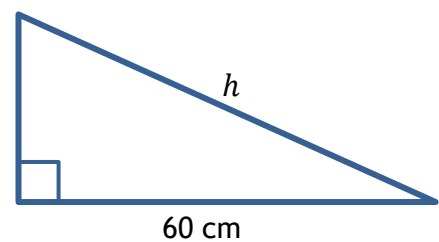
Green card sort

2. The area of this triangle is 330 cm^2

Work out the length of the hypotenuse, h .

Work out the length of the hypotenuse, h .

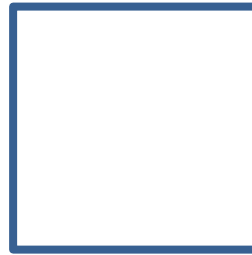
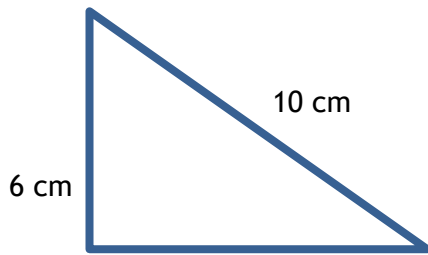
Not drawn accurately



[4 marks]

3. This triangle and square have the same perimeter.

Show that the square has an area 50% greater than the triangle.



Not drawn accurately

[5 marks]

Write down the formula for Pythagoras

Substitute in 6cm and 10cm and use a letter for the missing length

Use your calculator to find the missing length (remember to square root)

Find the perimeter of the triangle.

Divide the perimeter by 4 to find the length of side of the square.

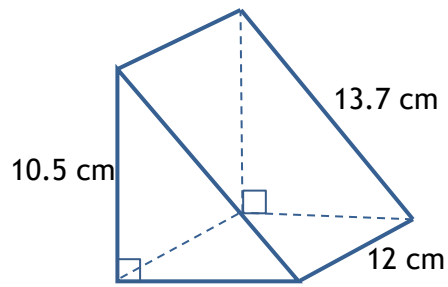
Find the area of the square

Find the area of the triangle

Show that area of triangle +50% is the area of the square (or $\times 1.5$)

4. The diagram shows a piece of cheese in the shape of a triangular prism.

Show that the square has an area 50% greater than the triangle.



Not drawn accurately

4a. Work out the area of cling film needed to cover the cheese.

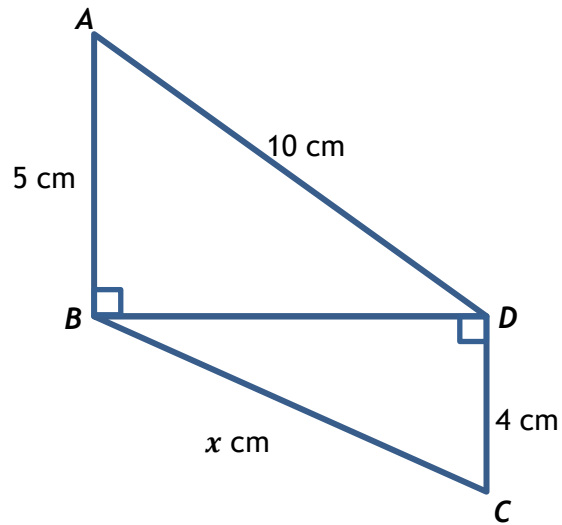
[5 marks]

4b. Is your answer likely to be accurate for the area of cling film used?
Give a reason for your answer.

[1 mark]

Write down the Pythagoras formula	
Substitute 10.5 and 13.7 into the formula and find the missing side	
Find the area of the triangular face and double it (why do we x 2?)	
Find the area of each of the 3 rectangular faces (be careful they are all different)	
Find the total surface area of the triangular prism	
State the area of cling film required to cover the cheese.	
4b. State whether the area in part 4a is likely to be accurate with a reason.	It accurate because...

5. Triangles ABD and BCD are right-angled triangles.



Not drawn
accurately

Work out the value of x .

Give your answer correct to 2 decimal places.

[4 marks]

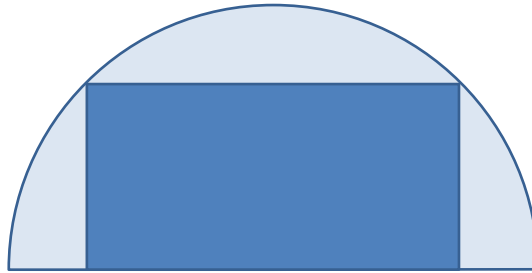
Additional questions:

6. The diagram shows a rectangle inside a semicircle.

The rectangle has dimensions 16 cm by 6 cm

Work out the shaded area.

Give your answer in terms of π .



[4 marks]

7. A circle has diameter 10 cm

A square has side length 6 cm

Use Pythagoras' theorem to show that the square will fit inside the circle without touching the edge of the circle

[4 marks]