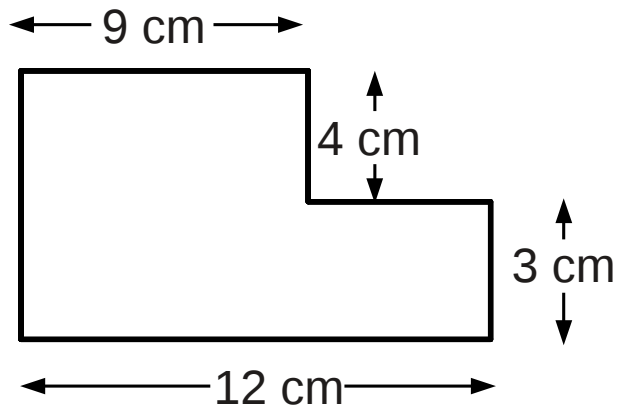# Worksheet 21: Mensuration

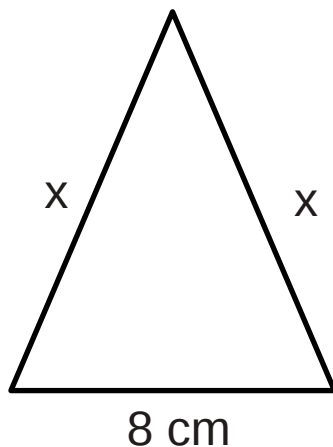Perimeter, area, volume

Perimeters

Question 1

Find the perimeter of the compound shape below

Question 2

The perimeter of the isosceles triangle below is 32cm
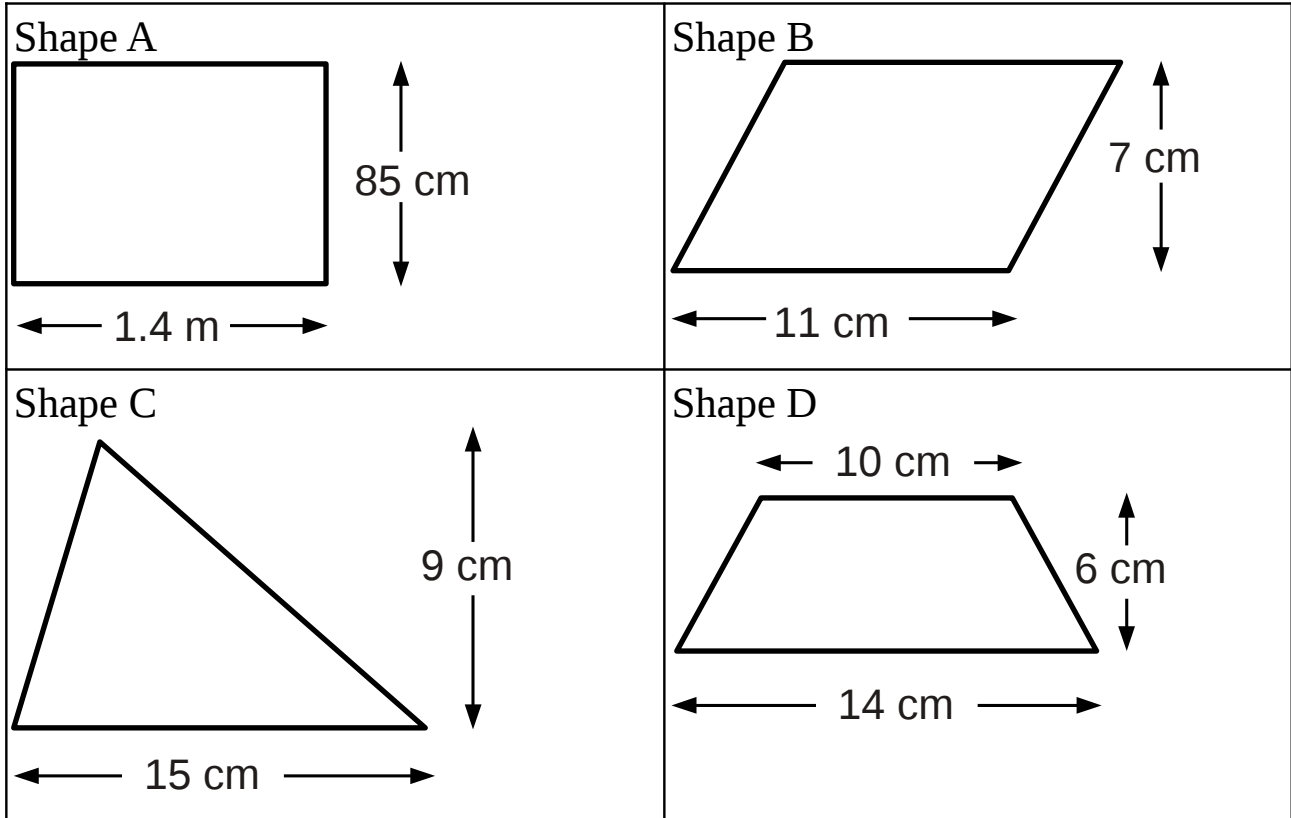
Find the length of the side marked x

Question 3

A circle has diameter 25cm. Calculate the circumference of the circle and quote your answer to 1 d.p.
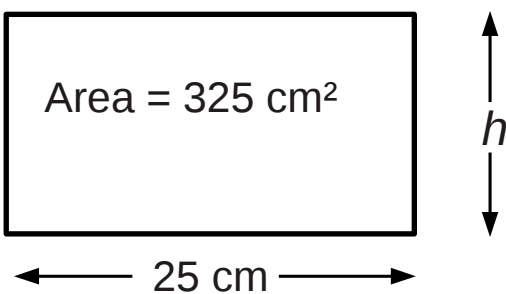
Areas

Question 1

For each of the shapes below, name the shape and calculate the area

Shape A	Shape B
85 cm 1.4 m	7 cm 11 cm
Shape C	**Shape D**
9 cm 15 cm	10 cm 6 cm 14 cm

Question 2

Calculate the perimeter of the rectangle shown in the diagram below

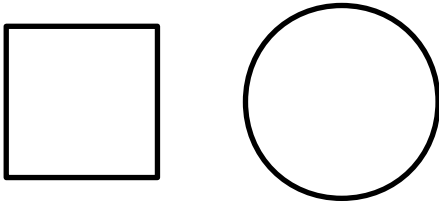Area = 325 cm²

h

25 cm

Question 3

A circle has diameter 2.7m measured to the nearest 10cm.

Calculate the area of the circle and round your answer to three significant figures.

Challenge: calculate the largest area consistent with the measurements

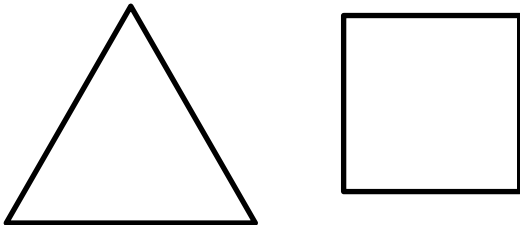# Problem solving questions about perimeter/area

Question 1

The square and the circle have perimeters that are equal.

The square has an area of 64 cm². Calculate the diameter of the circle.
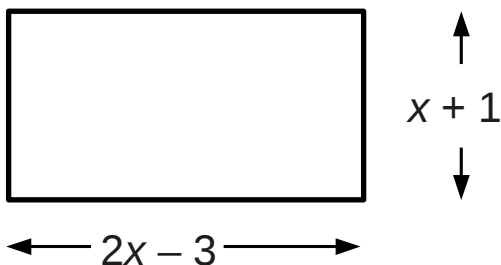
Question 2

The equilateral triangle has the same perimeter as the square.

One side of the equilateral triangle is 10cm long.
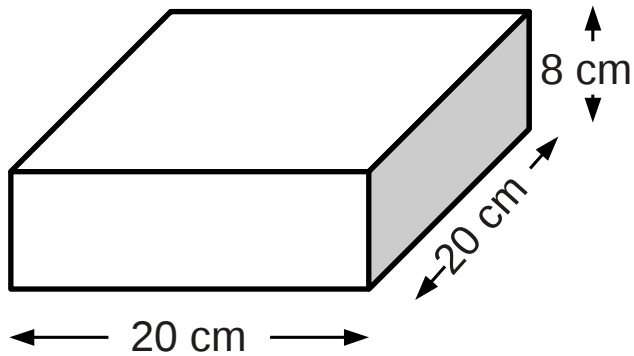
Work out the area of the square.

Question 3

The perimeter of the rectangle shown above is 26cm

Set up and solve an equation for x
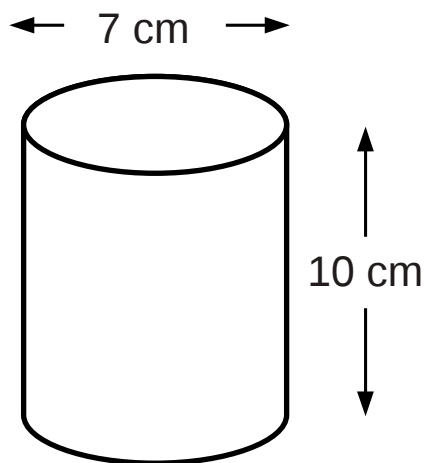
Work out the dimensions of the rectangle

Volumes

Question 1

Calculate the volume of the cuboid shown above in cm³

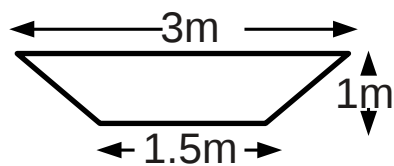What is the volume in litres to the nearest whole litre?

Question 2

Calculate the volume of the cylindrical food tin shown above

Give your answer to 1 decimal place of cm³

Question 3

The diagram above shows the cross-section of a flood drainage trench.

How long will the trench need to be to hold 100 m³ of water?