1   *PQR* is a right-angled triangle.
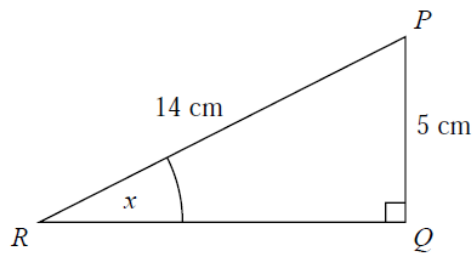

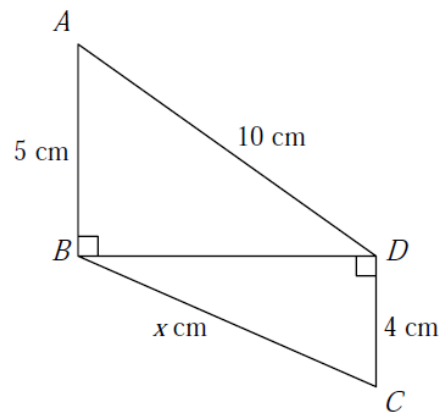Work out the size of the angle marked *x*.
Give your answer correct to 1 decimal place.

.... °

(Total for Question   is 2 marks)

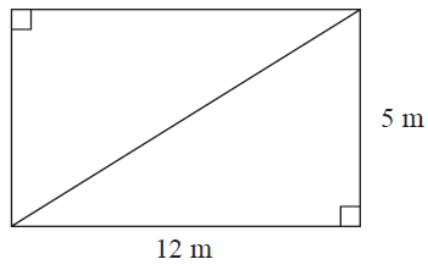**2**   Triangles *ABD* and *BCD* are right-angled triangles.

Work out the value of *x*.
Give your answer correct to 2 decimal places.

....

(Total for Question   is 4 marks)

3 This rectangular frame is made from 5 straight pieces of metal.

The weight of the metal is 1.5 kg per metre.

Work out the total weight of the metal in the frame.

.... kg

(Total for Question   is 5 marks)

4   *ABCD* is a trapezium.
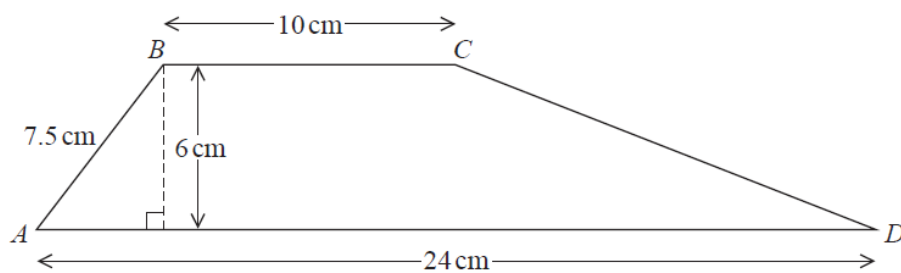
Work out the size of angle *CDA*.
Give your answer correct to 1 decimal place.

.... °

(Total for Question   is 5 marks)

5 ABC is a right-angled triangle.
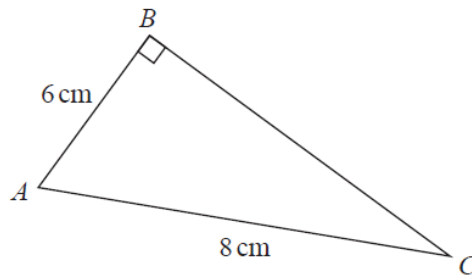
Here is Sarah's method to find the length of BC.

$$BC^2 = AB^2 + AC^2$$
$$= 6^2 + 8^2$$
$$= 100$$
$$BC = 10$$

(a) What mistake has Sarah made in her method?

....

....

....

(1)
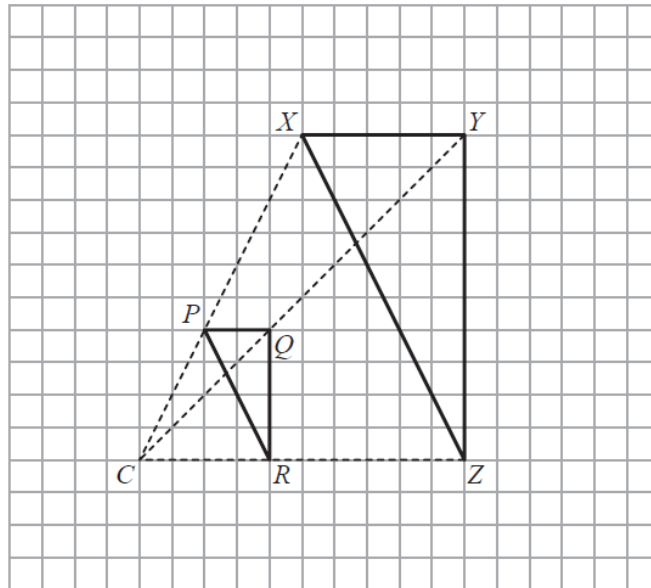
Roy is going to enlarge triangle PQR with centre C and scale factor $1\frac{1}{2}$

He draws triangle XYZ.

(b) Explain why Roy's diagram is **not** correct.
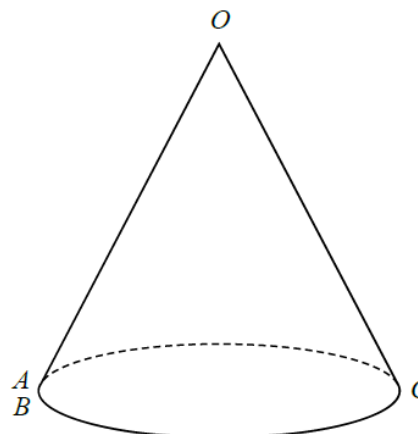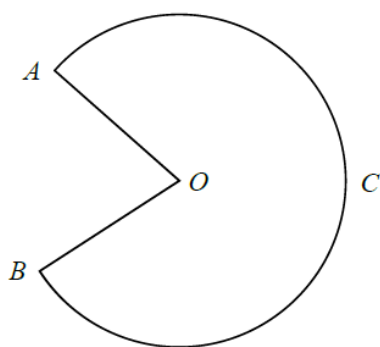
....

....

....

(1)

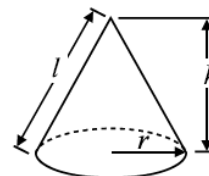**(Total for Question   is 2 marks)**

6 The diagram shows a sector $OACB$ of a circle with centre O.
The point C is the midpoint of the arc AB.

The diagram also shows a hollow cone with vertex O.
The cone is formed by joining OA and OB.

Volume of cone $= \dfrac{1}{3}\pi r^2 h$

Curved surface area of cone $= \pi r l$

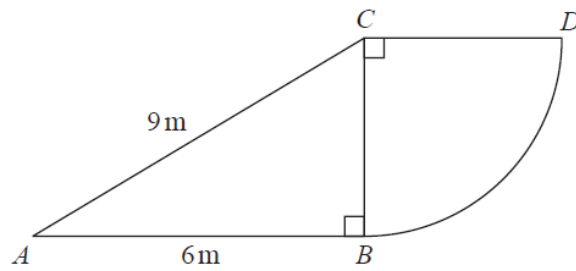The cone has volume $56.8\,\text{cm}^3$ and height $3.6\,\text{cm}$.

Calculate the size of angle AOB of sector $OACB$.
Give your answer correct to 3 significant figures.
You must show all your working.

(Total for Question   is 5 marks)

7 The diagram shows a right-angled triangle and a quarter circle.
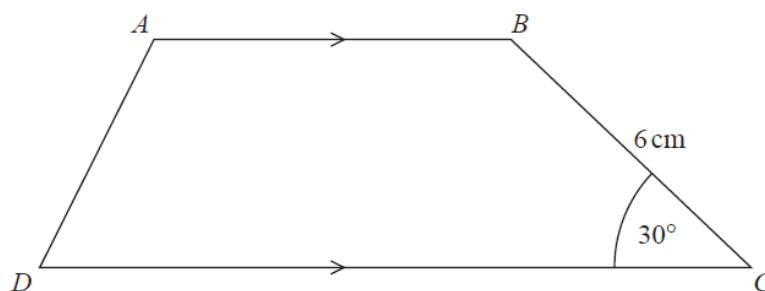

The right-angled triangle ABC has angle $ABC = 90°$
The quarter circle has centre C and radius CB.

Work out the area of the quarter circle.
Give your answer correct to 3 significant figures.
You must show all your working.

.... m²

(Total for Question   is 4 marks)

8 Here is trapezium $ABCD$.

The area of the trapezium is $66\,cm^2$

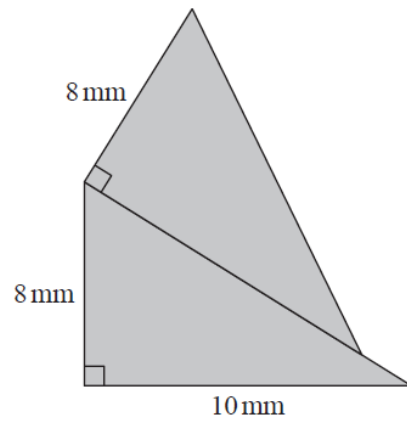the length of AB : the length of $CD = 2 : 3$

Find the length of AB.

.... cm

(Total for Question   is 5 marks)

9 Here is a right-angled triangle.

8 mm

10 mm
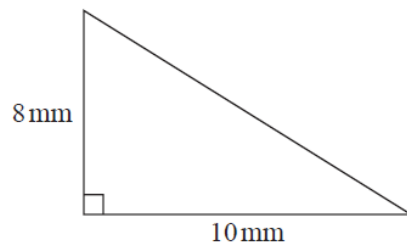
The shaded shape below is made from two of these triangles.

8 mm

8 mm

10 mm

Work out the perimeter of the shaded shape.
Give your answer correct to 3 significant figures.

.... mm

(Total for Question is 4 marks)