



Sectors (Area and Arc Length)



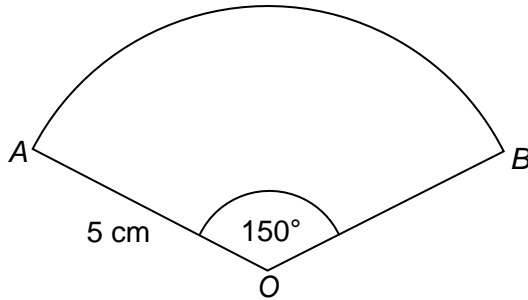
SCAN ME

REVISE THIS TOPIC

CHECK YOUR ANSWERS

SCAN ME

1 OAB is a sector of a circle.



Not drawn accurately

1 (a) Work out the area of the sector.
Give your answer to 1 decimal place. [2 marks]

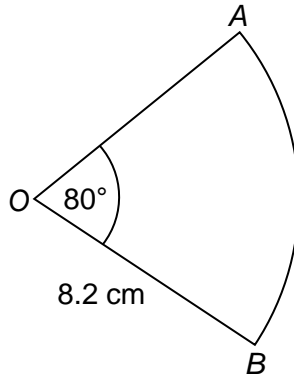
Answer _____ cm^2

1 (b) Work out the length of the arc AB .
Give your answer to 1 decimal place. [2 marks]

Answer _____ cm



2 OAB is a sector of a circle.



Not drawn accurately

2 (a) Work out the area of the sector.
Give your answer to 1 decimal place.

[2 marks]

Answer _____ cm^2

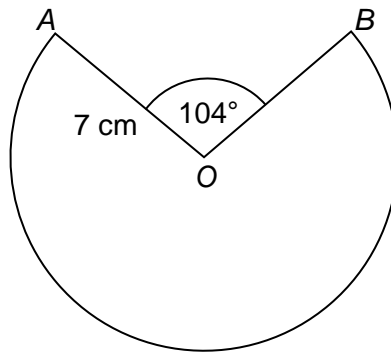
2 (b) Work out the length of the arc AB .
Give your answer to 1 decimal place.

[2 marks]

Answer _____ cm



3 OAB is a sector of a circle.



Not drawn accurately

3 (a) Work out the area of the sector.
Give your answer to 1 decimal place.

[2 marks]

Answer _____ cm²

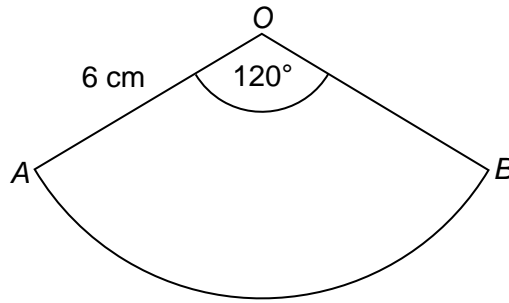
3 (b) Work out the length of the arc AB .
Give your answer to 1 decimal place.

[2 marks]

Answer _____ cm



4 OAB is a sector of a circle.



Not drawn accurately

4 (a) Work out the area of the sector.
Give your answer in terms of π

[2 marks]

Answer _____ cm^2

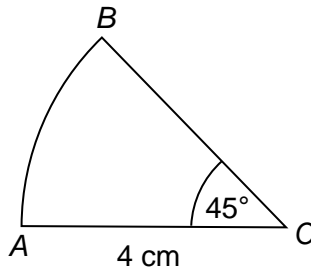
4 (b) Work out the length of the arc AB .
Give your answer in terms of π

[2 marks]

Answer _____ cm



5 OAB is a sector of a circle.



Not drawn accurately

5 (a) Work out the area of the sector.
Give your answer in terms of π

[2 marks]

Answer _____ cm^2

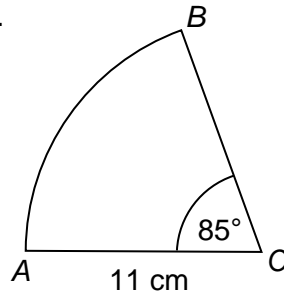
5 (b) Work out the length of the arc AB .
Give your answer in terms of π

[2 marks]

Answer _____ cm



6 OAB is a sector of a circle.



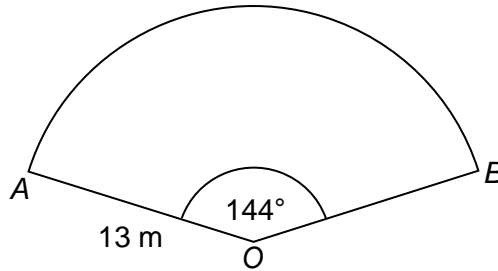
Not drawn accurately

Work out the **perimeter** of the sector.
Give your answer to 1 decimal place.

[3 marks]

Answer _____ cm

7 OAB is a sector of a circle.



Not drawn accurately

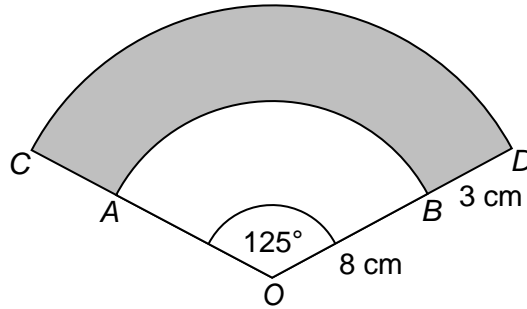
Work out the **perimeter** of the sector.
Give your answer to 1 decimal place.

[3 marks]

Answer _____ m



9 OAB and OCD are sectors of circles with centre O .



Not drawn accurately

$$OB = 8\text{ cm}$$

$$BD = 3\text{ cm}$$

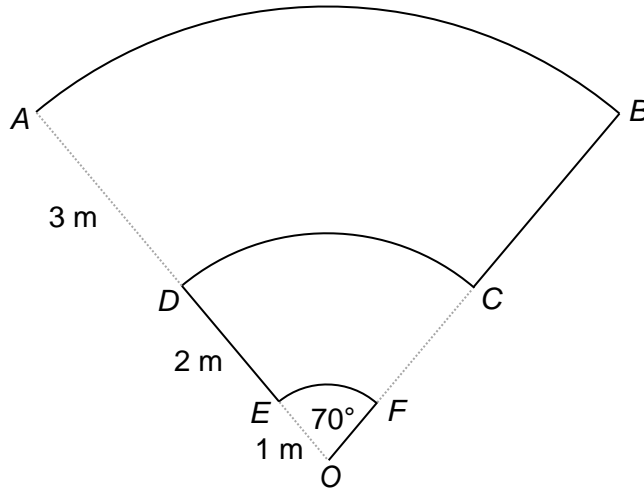
Work out the area of the shaded region.
Give your answer to 3 significant figures.

[4 marks]

Answer _____ cm^2



10 OAB , ODC and OEF are sectors of circles with centre O .



Not drawn accurately

$$OE = 1 \text{ m}$$

$$ED = 2 \text{ m}$$

$$DA = 3 \text{ m}$$

$$\text{Angle } AOB = \text{Angle } DOC = \text{Angle } EOF = 70^\circ$$

A robot starts at point A and follows the path $ABCDEFO$.

Work out the total distance that the robot travels.

Give your answer to 1 decimal place.

[4 marks]

Answer _____ m

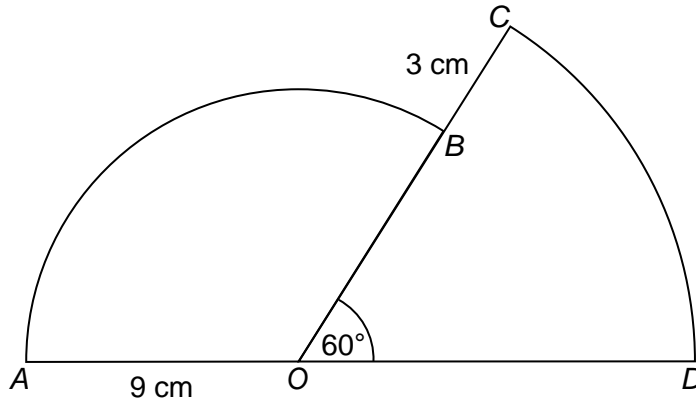
$\frac{\quad}{8}$

Turn over ►



11

OAB and OCD are sectors of circles with centre O .



Not drawn accurately

$$AO = 9 \text{ cm}$$

$$BC = 3 \text{ cm}$$

$$\text{Angle } COD = 60^\circ$$

AOB and OBC are straight lines.

Area of sector OAB – Area of sector $OCD = k\pi$ where k is an integer.

Work out the value of k .

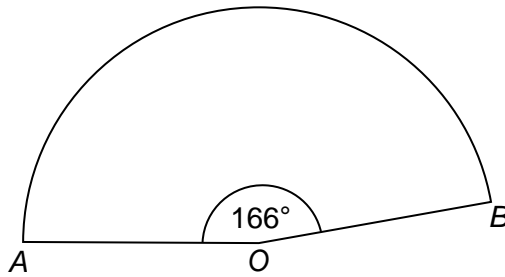
[4 marks]

$$k = \underline{\hspace{2cm}}$$





12 OAB is a sector of a circle.



Not drawn accurately

The area of the sector is 32 cm^2
Work out the radius of the sector.
Give your answer to 1 decimal place.

[3 marks]

Answer _____ cm

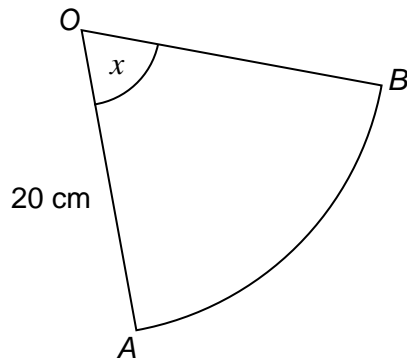


7

Turn over ►



13 OAB is a sector of a circle.



Not drawn accurately

The length of arc AB is 22 cm

Work out the value of x .

Give your answer to the nearest degree.

[3 marks]

$x =$ _____ °

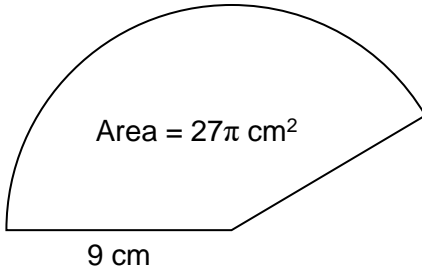


14 Here are two sectors from different circles.

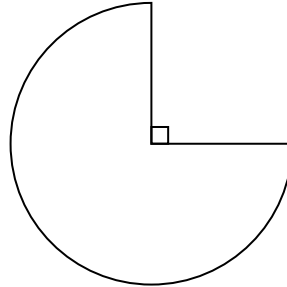


Not drawn accurately

Sector A



Sector B



The length of the arc of sector B = $2 \times$ the length of the arc of sector A

Work out the area of sector B
Give your answer in terms of π

[6 marks]

Answer _____ cm^2

$\frac{\quad}{9}$

