

Arcs and Sectors

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **25**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. You may use a calculator.

- 1** The diagram shows a sector of a circle of radius 9 cm.

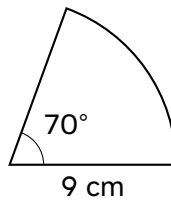


Diagram **NOT** accurately drawn

Work out the area of the sector.
Give your answer correct to 1 decimal place.

..... cm²
(2)

(Total for Question 1 is 2 marks)

- 2 A sector has radius 12 cm and angle 150°

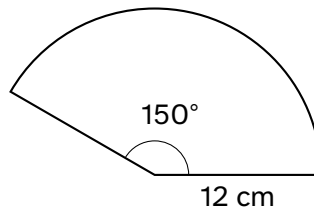


Diagram **NOT** accurately drawn

Work out the length of the arc.
Give your answer correct to 1 decimal place.

..... cm
(2)

(Total for Question 2 is 2 marks)

- 3 A sector has radius 7 cm and angle 100°

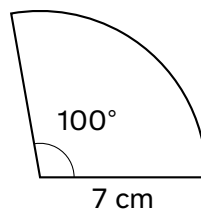


Diagram **NOT** accurately drawn

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

..... cm
(3)

(Total for Question 3 is 3 marks)

- 4** A sector has radius 10 cm and angle 90°
Work out the area of the sector.
Give your answer in terms of π .

..... cm^2
(2)

(Total for Question 4 is 2 marks)

- 5** A sector has radius 6 cm and angle 40°
Show that the area of the sector is $4\pi \text{ cm}^2$

(2)

(Total for Question 5 is 2 marks)

- 6 The diagram shows a sector OAB of a circle, centre O .
Angle $AOB = 150^\circ$
The length of the arc AB is 10π cm.

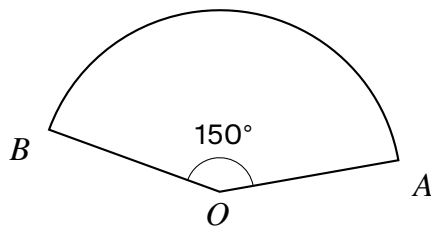


Diagram **NOT** accurately drawn

Work out the radius of the circle.

..... cm
(3)

(Total for Question 6 is 3 marks)

- 7 A flower bed is in the shape of a sector of a circle.
The radius is 4 m and the angle is 135°
Ali puts fertiliser on the flower bed.
One box of fertiliser covers 5 m^2

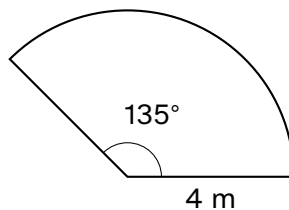


Diagram **NOT** accurately drawn

How many boxes of fertiliser does Ali need?

.....

(3)

(Total for Question 7 is 3 marks)

- 8 The diagram shows a quarter circle OAB , centre O and radius 12 cm. A semicircle is drawn with OA as its diameter.

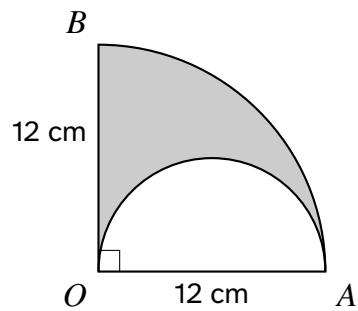


Diagram **NOT** accurately drawn

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

..... cm^2
(4)

(Total for Question 8 is 4 marks)

- 9 A badge is cut from card in the shape of a sector OAB of a circle, centre O .
Angle $AOB = 72^\circ$
The badge has an area of $20\pi \text{ cm}^2$
Yusra sews braid all the way round the edge of the badge.

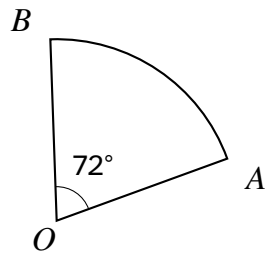


Diagram **NOT** accurately drawn

Work out the length of braid Yusra needs.
Give your answer correct to 3 significant figures.

..... cm

(4)

(Total for Question 9 is 4 marks)