

Circles - Circumference and Area

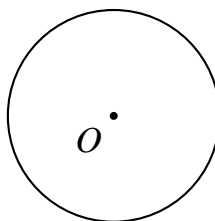
For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

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.

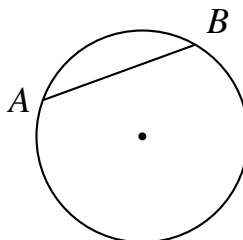
- 1** (a) Here is a circle, centre O .



On the diagram, draw a radius of the circle.

(1)

- (b) Here is another circle.



Write down the mathematical name of the line AB .

.....
(1)
(Total for Question 1 is 2 marks)

- 2 A circle has radius 6 cm.

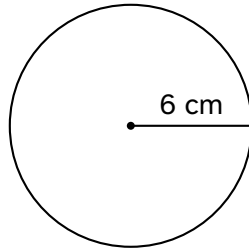


Diagram **NOT** accurately drawn

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

..... cm²
(2)

(Total for Question 2 is 2 marks)

- 3 A circle has a diameter of 14 cm.
Work out the area of the circle.
Give your answer in terms of π .

..... cm²
(2)

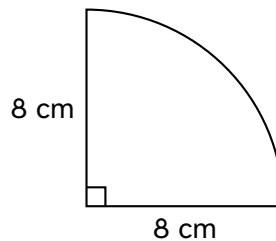
(Total for Question 3 is 2 marks)

- 4 The circumference of a circle is 40 cm.
Work out the diameter of the circle.
Give your answer correct to 1 decimal place.

..... cm
(2)

(Total for Question 4 is 2 marks)

- 5 Here is a shape.



*Diagram **NOT** accurately drawn*

The diagram shows a quarter of a circle of radius 8 cm.
Work out the perimeter of the shape.
Give your answer correct to 1 decimal place.

..... cm
(3)

(Total for Question 5 is 3 marks)

- 6** A circular sandpit has an area of 7 m^2 .
Kai is going to put wooden edging all the way round the sandpit.
Work out the length of edging Kai needs.
Give your answer correct to 1 decimal place.

..... m
(3)

(Total for Question 6 is 3 marks)

- 7** Ella wants to put a strip of lights all the way round the edge of a circular mirror.
The mirror has a diameter of 90 cm.
Strips of lights are sold in packs.
Each pack has 1 m of lights and costs £4.75
Work out the total cost of the packs Ella needs to buy.

£
(4)

(Total for Question 7 is 4 marks)

- 8 The diagram shows a semicircle with centre O and diameter AB .
 $AB = 10$ cm.
 C is the point on the semicircle with OC perpendicular to AB .

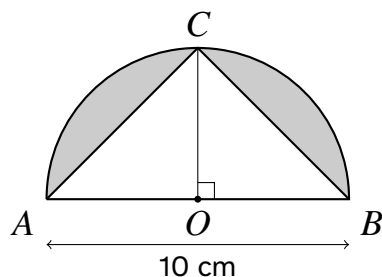


Diagram **NOT** accurately drawn

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

..... cm^2
 (3)

(Total for Question 8 is 3 marks)

- 9 A park has a semicircular path and a straight path between points A and B .
 $AB = 150$ m.

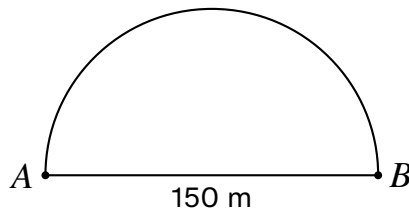


Diagram **NOT** accurately drawn

- (a) Ade walks from A to B along the semicircular path.
 Bea walks from A to B along the straight path.
 How much further does Ade walk than Bea?
 Give your answer correct to the nearest metre.

..... m
 (2)

- (b) Ade walks at a constant speed of 1.2 m/s.
 How long does it take Ade to walk along the semicircular path?
 Give your answer in minutes and seconds, to the nearest second.

..... minutes seconds
 (2)

(Total for Question 9 is 4 marks)