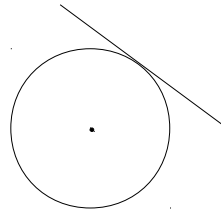


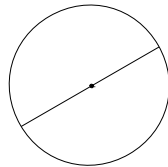
- 1 (a) On a circle, draw a radius of the circle.
- (b) On a circle, draw a sector of the circle.
Shade the sector.

(Total for question 1 is 2 marks)

- 2 (a) Write down the mathematical name for the straight line touching the circle.



- (b) Write down the mathematical name for the straight line shown in the diagram.



(Total for question 2 is 2 marks)

- 3 A circle has a radius of 6.5 cm.
Work out the circumference of the circle.
Give your answer correct to 2 decimal places.

(Total for question 3 is 3 marks)

- 4 A circle has a diameter of 9 m.
Work out the area of the circle.
Give your answer correct to 1 decimal place.

(Total for question 4 is 3 marks)

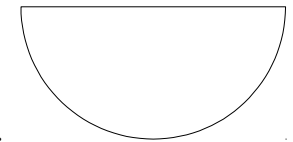
- 5 A circle has a diameter of 12 mm.
Work out the circumference of the circle.
Give your answer in terms of π

(Total for question 5 is 3 marks)

- 6 A circle has a radius of 8 cm.
Work out the area of the circle.
Give your answer in terms of π

(Total for question 6 is 3 marks)

- 7 A semi-circle has an area of 50 m^2 .
Find the perimeter of the semi-circle.
Give your answer correct to one decimal place.

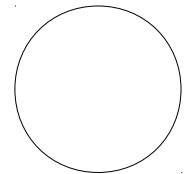


(Total for question 7 is 3 marks)

- 8 A circular field has a diameter of 32 metres.
A farmer wants to build a fence around the edge of the field.

Each metre of fence will cost £15.95

Work out the total cost of the fence.



(Total for question 8 is 3 marks)

- 9 An area is formed by a square, $ABCD$, and a semi circle.
 BD is the diameter of the semi circle.

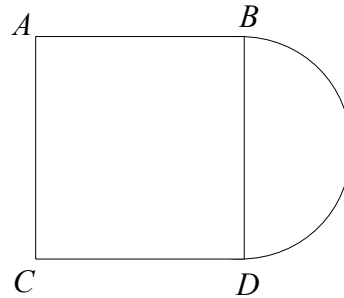
The radius of the semi circle is 4m.

The area is going to be covered completely with lawn seed.

A box of lawn seed covers 25 m^2 .

How many boxes of lawn seed will be needed?
You must show your working.

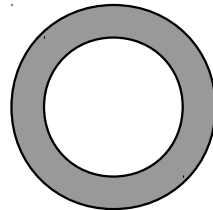
(Total for question 9 is 5 marks)



- 10 The diagram shows a shaded ring formed by cutting a smaller circle out of a larger circle.

The radius of the smaller circle is 6 cm.
The diameter of the larger circle is 15 cm.

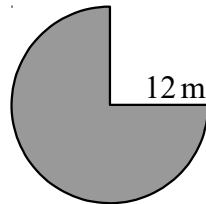
Find the area of the shaded ring.



(Total for question 10 is 3 marks)

- 11 The diagram shows three quarters of a circle with a radius of 12 metres.

Find the perimeter of the shape.

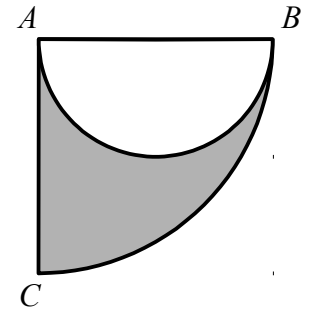


(Total for question 11 is 3 marks)

- 12 The diagram shows a semi circle inside a sector of a circle, ABC .

AB is the diameter of the semi circle.
Angle $BAC = 90^\circ$
 $AB = 12 \text{ cm}$

Find the area of the shaded region.



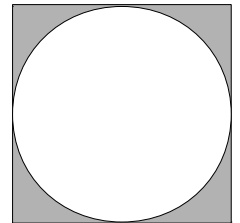
(Total for question 12 is 3 marks)

- 13 A circle is enclosed by a square as shown in the diagram.

Each side of the square measures 8cm.

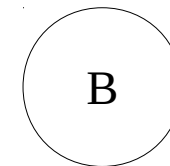
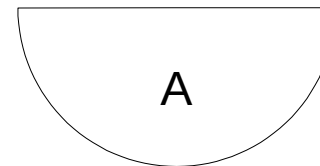
Find the area of the shaded region.

Give your answer correct to 1 decimal place.



(Total for question 13 is 3 marks)

- 14



Shape **A** is a semi-circle which has a radius of 12 cm.
Shape **B** is a circle.

The area of shape **A** is 8 times the area of shape **B**.

Show that the radius of shape **B** is 3 cm.

(Total for question 14 is 3 marks)