Area and Circumference of Circles

Question Paper

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	Area and Circumference of Circles
Grade Level	Grade 3
Booklet	Question Paper

Time Allowed: **56 minutes**

Score: **/46**

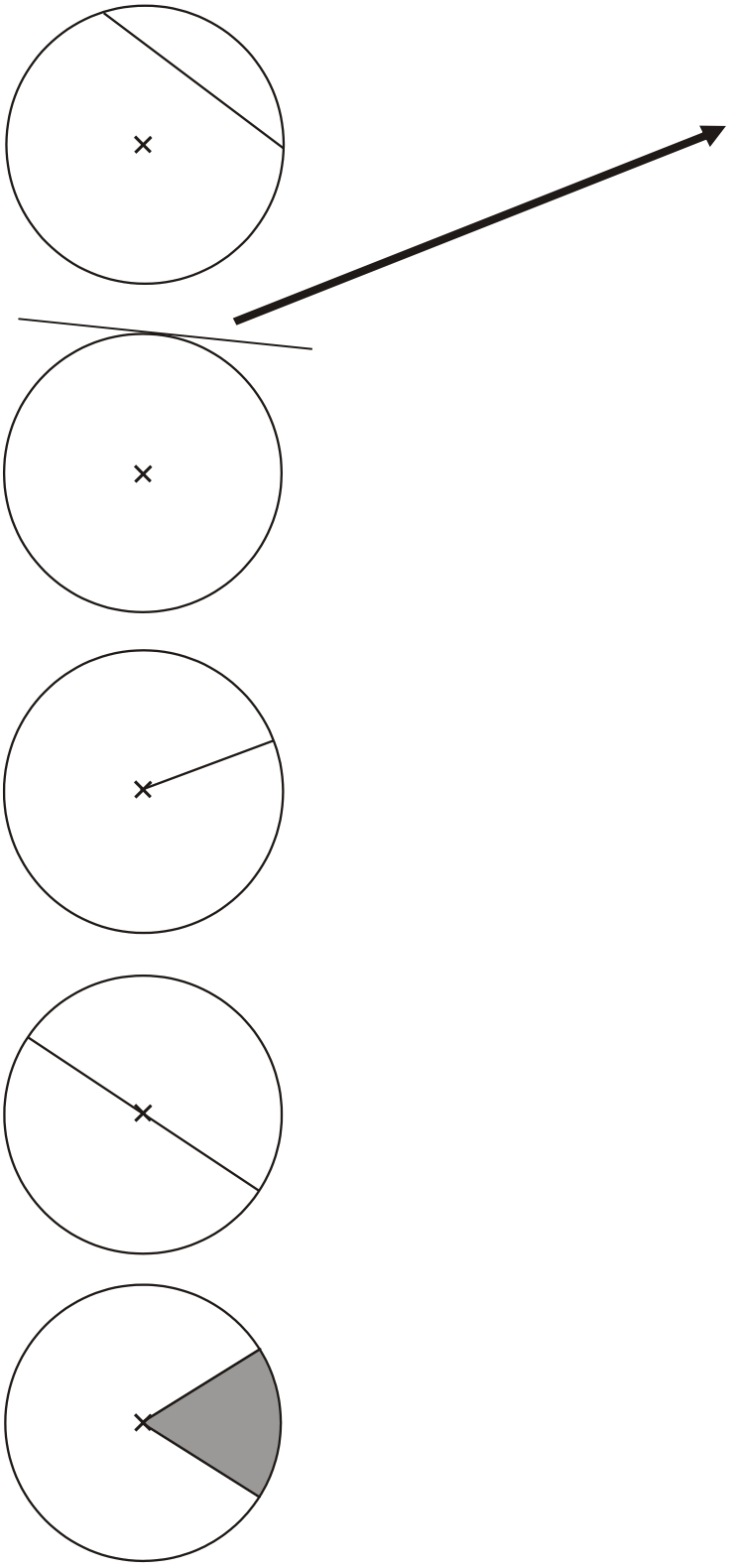
Percentage: **/100**

Grade Boundaries:

1. Here are 5 diagrams and 5 labels.
In each diagram the centre of the circle is marked with a cross (×).

Match each diagram to its label.
One has been done for you.

Diagram **Label**



Circle and tangent

Circle and radius

Circle and chord

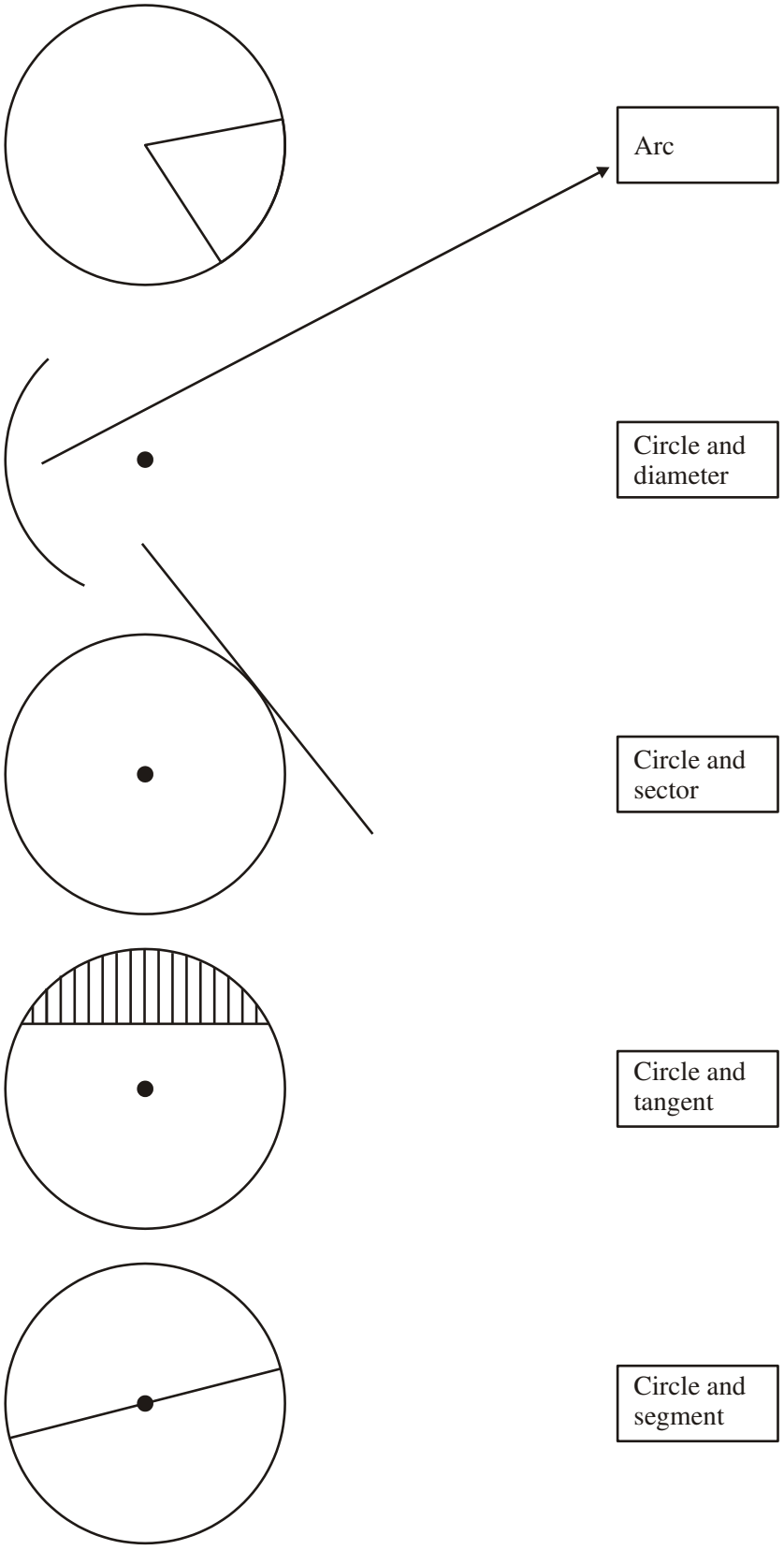
Circle and sector

Circle and diameter

(3 marks)

2. Here are some diagrams relating to a circle.

Draw an arrow from each of the diagrams to its mathematical name.
The arrow showing an arc is drawn for you.



(3 marks)

3. The radius of a circle is 3.60 m.

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

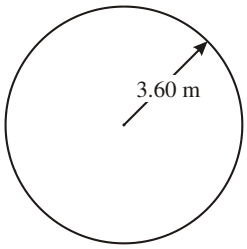


Diagram **NOT** accurately drawn

……..……..

(3 marks)

4. The diameter of a wheel on Harry's bicycle is 0.65 m.

Calculate the circumference of the wheel.
Give your answer correct to 2 decimal places.

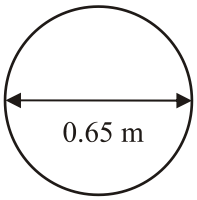


Diagram **NOT** accurately drawn

.....

(3 marks)

5.

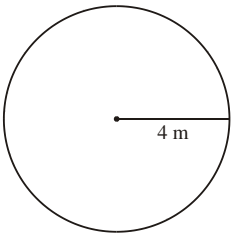


Diagram **NOT** accurately drawn

The radius of a circle is 4 m.

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

.....

(3 marks)

6. A circle has a radius of 6.1 cm.
Work out the circumference of the circle.

Give your answer correct to 3 significant figures.

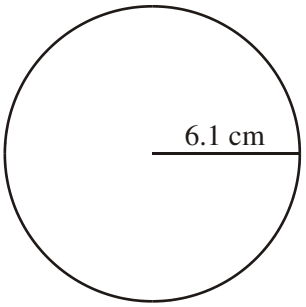


Diagram **NOT** accurately drawn

.....

(3 marks)

7. The radius of a circle is 6.4 cm.

Work out the circumference of this circle.

Give your answer correct to 1 decimal place.

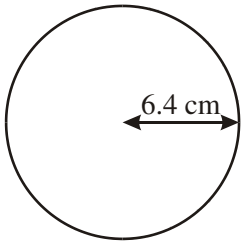


Diagram **NOT** accurately drawn

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(3 marks)

8.

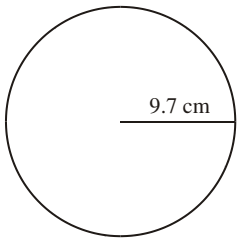

Diagram **NOT** accurately drawn

The radius of the circle is 9.7 cm.
Work out the area of the circle.
Give your answer to 3 significant figures.

……

(3 marks)

9. The diameter of a circle is 12 centimetres.

(a) Work out the circumference of the circle.
Give your answer, in centimetres, correct to 1 decimal place.

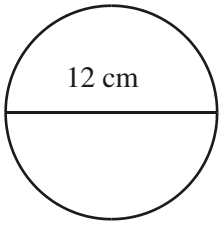

Diagram **NOT** drawn accurately

.....

(3 marks)

10. Here is a tile in the shape of a semicircle.

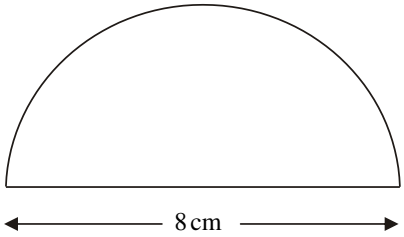

Diagram **NOT** accurately drawn

The diameter of the semicircle is 8 cm.

Work out the perimeter of the tile.
Give your answer correct to 2 decimal places.

..... cm

(3 marks)

11.

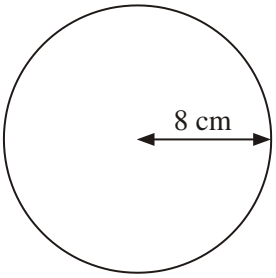

Diagram **NOT** accurately drawn

The radius of this circle is 8 cm.

Work out the circumference of the circle.
Give your answer correct to 2 decimal places.

..... cm

(3 marks)

12.

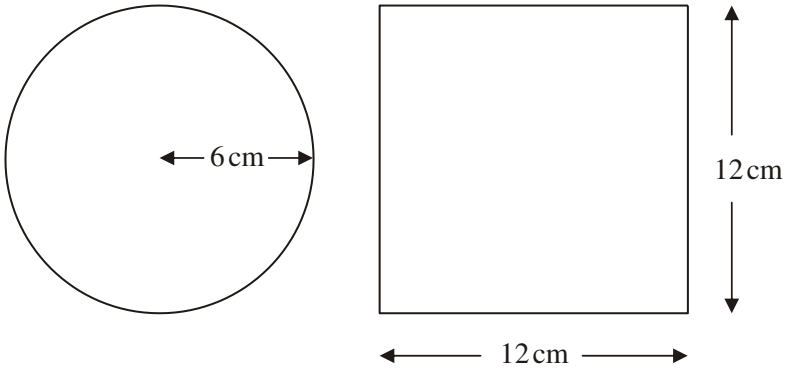

Diagram **NOT** accurately drawn

A circle has a radius of 6 cm.

A square has a side of length 12 cm.

Work out the difference between the area of the circle and the area of the square.
Give your answer correct to one decimal place.

.....

(4 marks)

13. The top of a table is a circle.
The radius of the top of the table is 50 cm.

(a) Work out the area of the top of the table.

……cm^2

(2)

The base of the table is a circle.
The diameter of the base of the table is 40 cm.

(b) Work out the circumference of the base of the table.

……cm

(2)

(4 marks)

14.

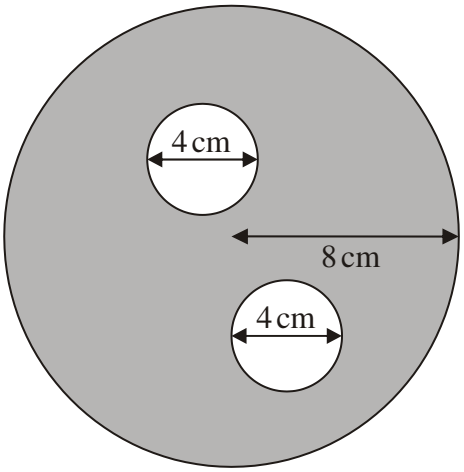

Diagram **NOT** accurately drawn

The diagram shows two small circles inside a large circle.
The large circle has a radius of 8 cm.

Each of the two small circles has a diameter of 4 cm.

(a) Write down the radius of each of the small circles.

..... cm

(1)

(b) Work out the area of the region shown shaded in the diagram.
Give your answer correct to one decimal place.

..... cm^2

(4)

(5 marks)