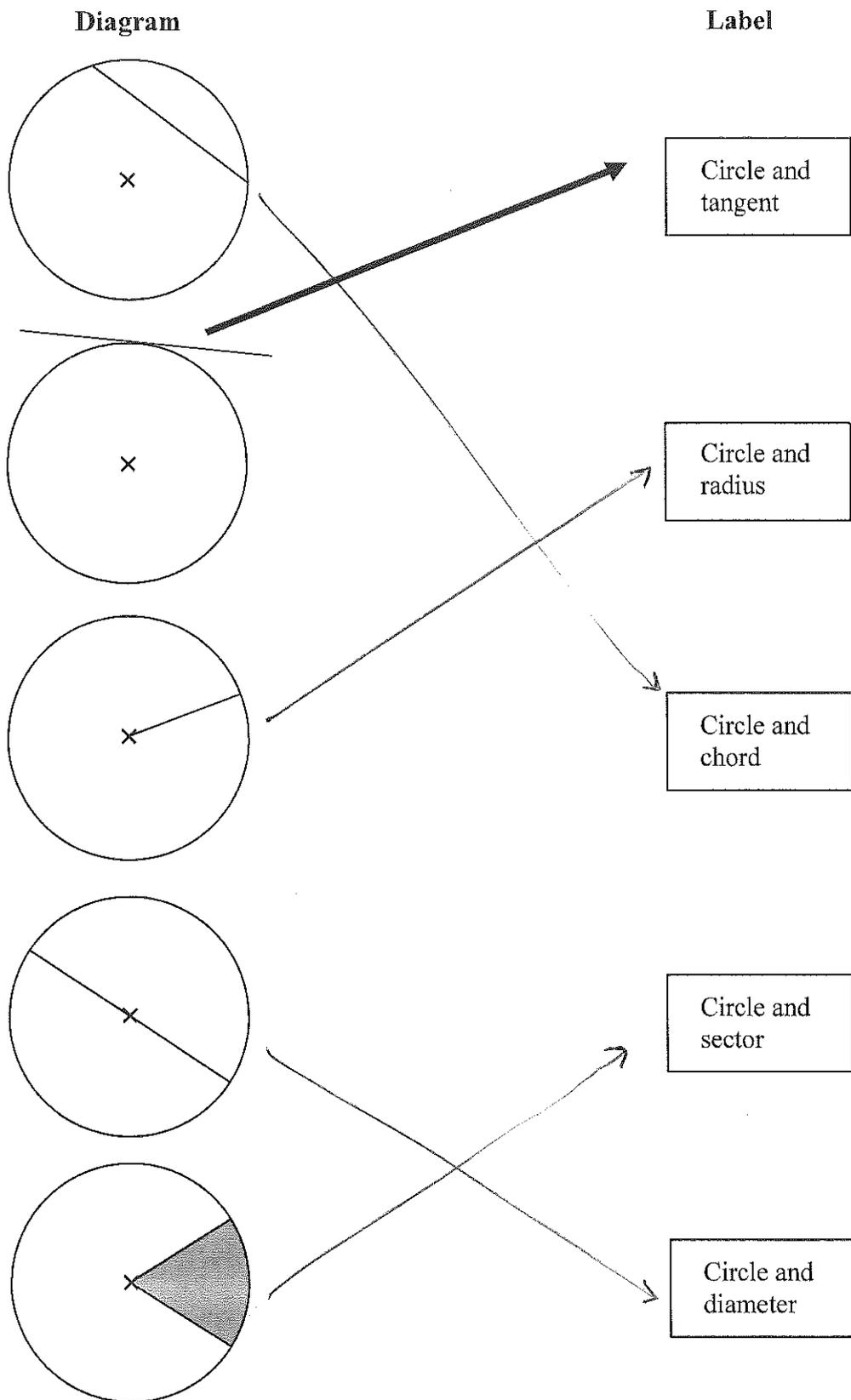


1. Here are 5 diagrams and 5 labels.
In each diagram the centre of the circle is marked with a cross (×).

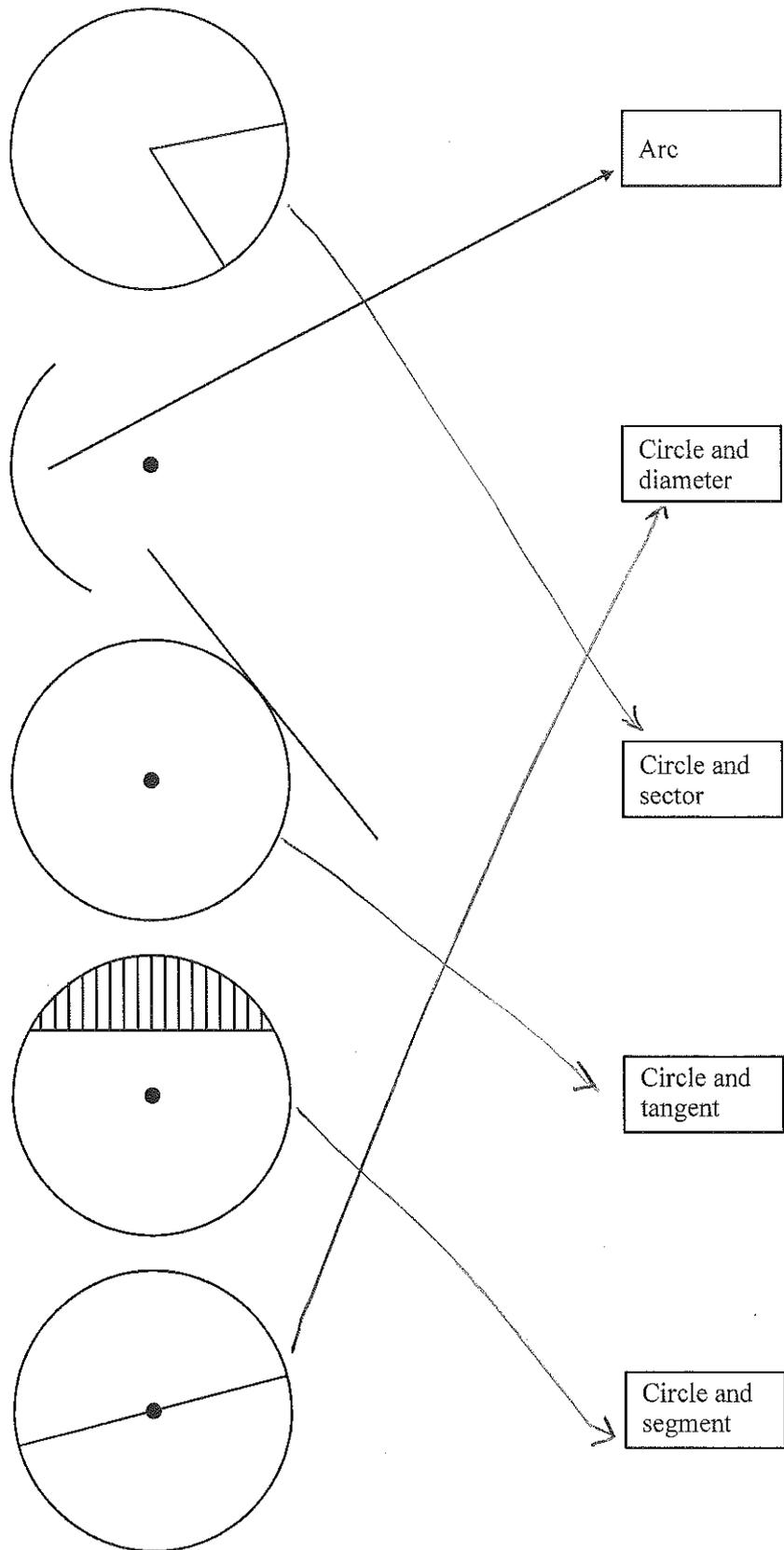
Match each diagram to its label.
One has been done for you.



(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.

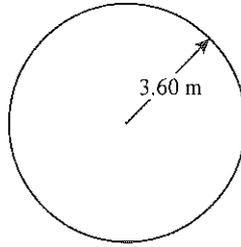


Diagram NOT
accurately drawn

$$\pi \times (3.6)^2$$

$$\dots 40.7 \text{ m}^2 \text{ (3sf)}$$

(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.

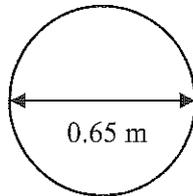


Diagram NOT
accurately drawn

$$\pi \times 0.65$$

$$\dots 2.04 \text{ m (2dp)}$$

(3 marks)

- 5.

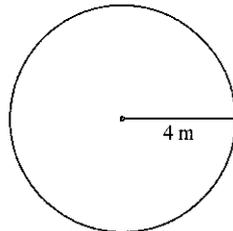


Diagram NOT
accurately drawn

The radius of a circle is 4 m.

Work out the area of the circle.

Give your answer correct to 3 significant figures.

$$\pi \times (4)^2$$

$$\dots 50.3 \text{ m}^2 \text{ (3sf)}$$

(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.

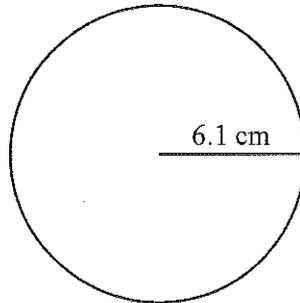


Diagram NOT
accurately drawn

$$2 \times \pi \times 6.1$$

$$\dots\dots\dots 38.3 \text{ cm (3sf)}$$

(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.

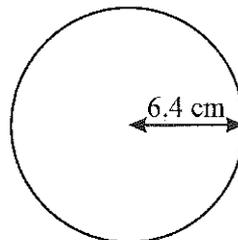


Diagram NOT
accurately drawn

$$2 \times \pi \times 6.4$$

$$\dots\dots\dots 40.2 \text{ cm (1dp)}$$

(3 marks)

- 8.

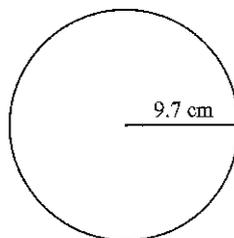


Diagram NOT
accurately drawn

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

$$\pi \times (9.7)^2$$

$$\dots\dots\dots 296 \text{ cm}^2 \text{ (3sf)}$$

(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.

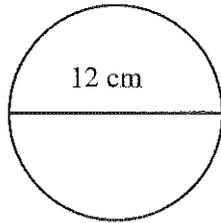


Diagram NOT
drawn accurately

$$\pi \times 12$$

$$\dots\dots\dots 37.7 \text{ cm (1dp)}$$

(3 marks)

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

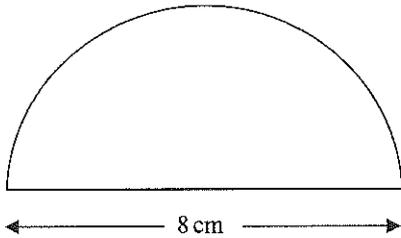


Diagram NOT
accurately drawn

$$\frac{\pi \times 8}{2} + 8$$

The diameter of the semicircle is 8 cm.

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

$$\dots\dots\dots 20.57 \text{ cm (2dp)}$$

(3 marks)

11.

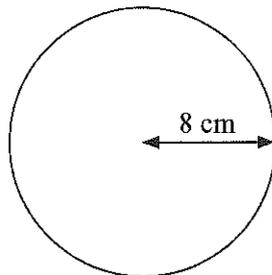


Diagram NOT
accurately drawn

$$2 \times \pi \times 8$$

The radius of this circle is 8 cm.

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

$$\dots\dots\dots 50.27 \text{ cm (2dp)}$$

(3 marks)

12.

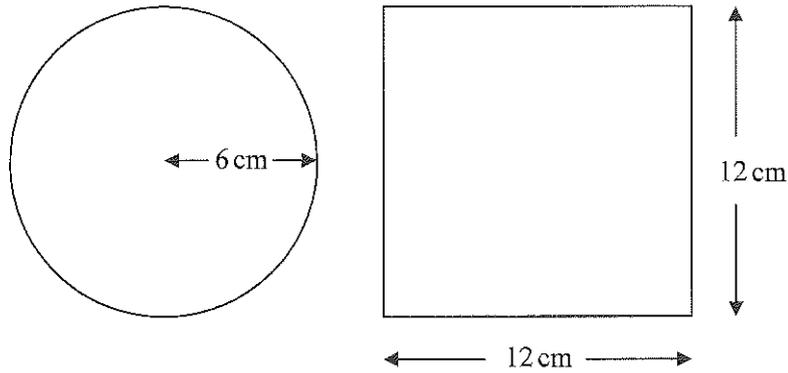


Diagram NOT accurately drawn

A circle has a radius of 6 cm.

A square has a side length 12 cm.

Work out the difference between the area of the circle and the area of the square.

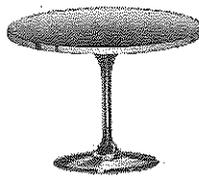
Give your answer correct to one decimal place.

$$\begin{aligned} \text{Circle: } & \pi \times 6^2 \\ & = 113.1 \text{ cm}^2 \quad (1dp) \end{aligned} \quad \text{Square: } 12 \times 12 = 144 \text{ cm}^2$$

$$\dots\dots\dots 30.9 \text{ cm}^2 \quad (1dp)$$

(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.

$$\pi \times 50^2$$

$$\dots\dots\dots 7854.0 \text{ cm}^2 \quad (1dp)$$

(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.

$$\pi \times 40$$

$$\dots\dots\dots 125.7 \text{ cm} \quad (1dp)$$

(2)

(4 marks)

14.

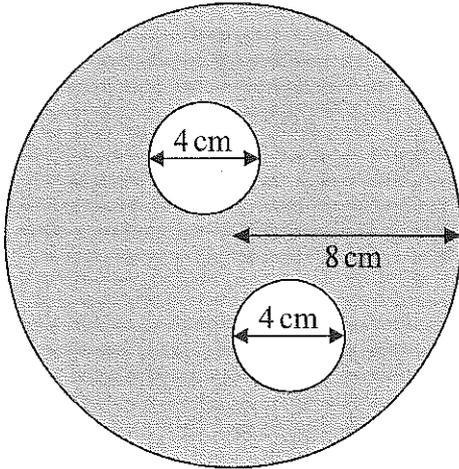


Diagram **NOT** accurately drawn

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.

..... 2 cm

(1)

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

$$\pi \times 8^2 - 2(\pi \times 2^2)$$

..... 175.9 cm² (1dp)

(4)

(5 marks)