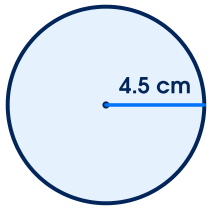
GCSE FOUNDATION · REVISION MAT 2

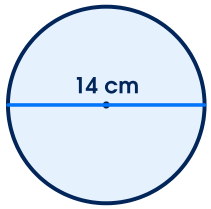
Circumference and area of circles

1 A circle has radius 4.5 cm.



Work out its circumference.
Give your answer to 1 decimal place.

2 A circle has diameter 14 cm.



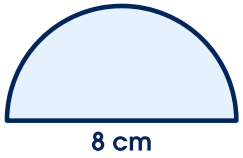
Work out its area.
Give your answer to 1 decimal place.

3 A circle has diameter 10 cm.

Cara works out the area as $\pi \times 10^2 = 314.2\ cm^2$

Explain the mistake Cara has made.

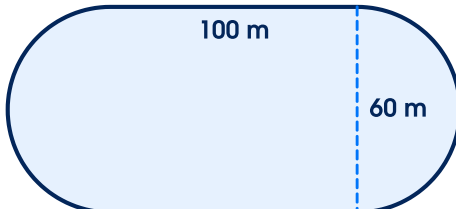
4 Show that the area of this semicircle is 25.1 cm^2, correct to 1 d.p.



5 A bicycle wheel has a diameter of 70 cm.

How many complete turns does the wheel make when the bicycle travels 150 m?

6 A running track is a rectangle with a semicircle at each end.



Work out the distance once round the track.
Give your answer to the nearest metre.

ANSWERS · REVISION MAT 2

Circumference and area of circles

1 $2 \times \pi \times 4.5 = \mathbf{28.3\ cm}$

2 Radius = 7 cm

$\pi \times 7^2 = \mathbf{153.9\ cm^2}$

3 Cara used the diameter instead of the radius.

Radius = 5 cm, so area = $\pi \times 5^2 = \mathbf{78.5\ cm^2}$

4 Radius = 4 cm

$\pi \times 4^2 \div 2 = \mathbf{25.1\ cm^2}$ ✓

5 Circumference = $\pi \times 70 = 219.9$ cm

$15\,000 \div 219.9 = 68.2$

68 complete turns

6 Two semicircles make a circle of diameter 60 m: $\pi \times 60 = 188.5$ m

Total = $2 \times 100 + 188.5 = \mathbf{388\ m}$