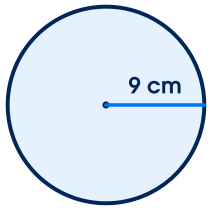
GCSE FOUNDATION · REVISION MAT 3

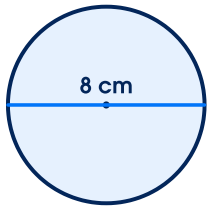
Circumference and area of circles

1 A circle has radius 9 cm.



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

2 A circle has diameter 8 cm.



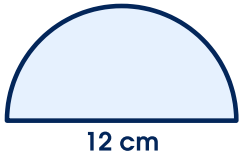
Work out its area.
Give your answer to 1 decimal place.

3 A circle has diameter 16 cm.

Dev works out the area as $\pi \times 16^2 = 804.2\ cm^2$

Explain the mistake Dev has made.

4 Show that the area of this semicircle is 56.5 cm^2, correct to 1 d.p.



5 A bicycle wheel has a diameter of 50 cm.

How many complete turns does the wheel make when the bicycle travels 80 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 3

Circumference and area of circles

1 $2 \times \pi \times 9 = \mathbf{56.5\ cm}$

2 Radius = 4 cm

$\pi \times 4^2 = \mathbf{50.3\ cm^2}$

3 Dev used the diameter instead of the radius.

Radius = 8 cm, so area = $\pi \times 8^2 = \mathbf{201.1\ cm^2}$

4 Radius = 6 cm

$\pi \times 6^2 \div 2 = \mathbf{56.5\ cm^2}$ ✓

5 Circumference = $\pi \times 50 = 157.1$ cm

$8\,000 \div 157.1 = 50.9$

50 complete turns

6 Two semicircles make a circle of diameter 30 m: $\pi \times 30 = 94.2$ m

Total = $2 \times 60 + 94.2 = \mathbf{214\ m}$

Mr&Mrs MATHS