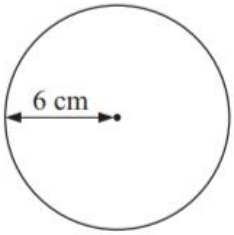
Circle Properties – Area and Perimeter Questions

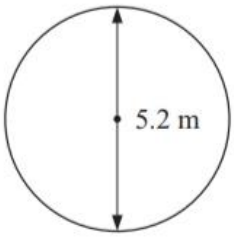
EXERCISE 10B

1 Use $\pi \approx 3.14$ to find the circumference of:

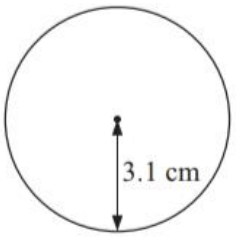
a



b



c



2 Using your calculator, find correct to 2 decimal places the circumference of a circle with:

a radius 4 cm **b** diameter 18 m **c** radius 7.2 km.

3 A cylindrical water tower has a base diameter of 7 m. Find the circumference of the base.

4 A circular flower bed has a radius of 2.5 m. Find the perimeter of the flower bed.

5 A bicycle wheel has radius 40 cm.

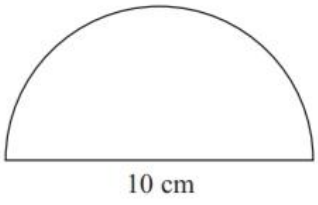
a Find the circumference of the wheel.

b How many kilometres would be travelled if the wheel rotates 10 000 times?

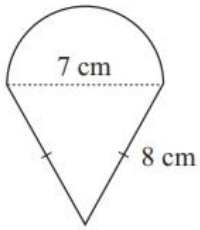
c How many times does the wheel rotate if the bicycle is ridden 10 km?

6 Find the perimeter, correct to 2 decimal places, of:

a



b



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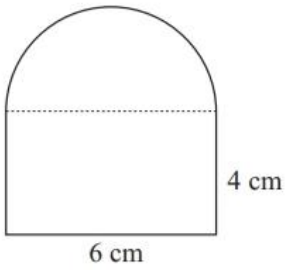
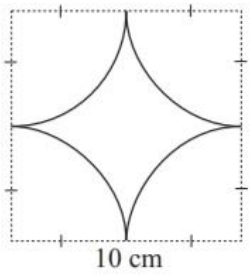
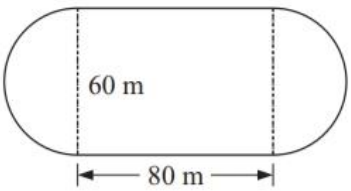


d



e



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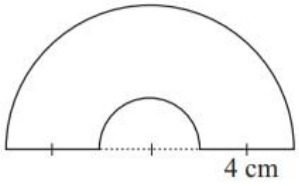
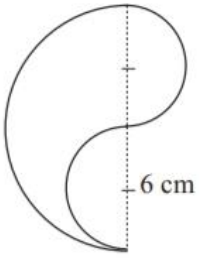
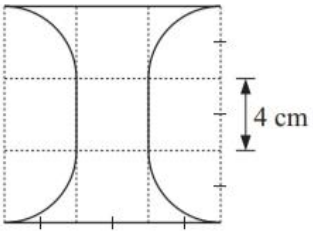


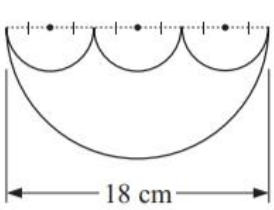
g



h

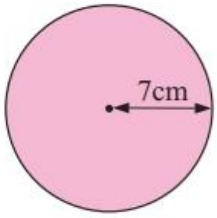


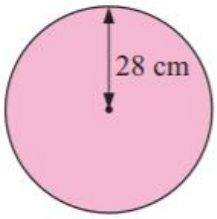
i

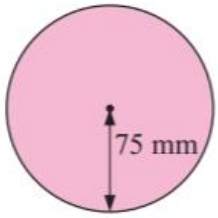


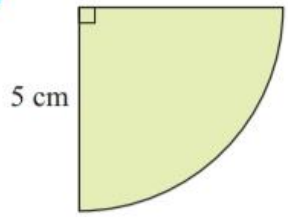
EXERCISE 10D

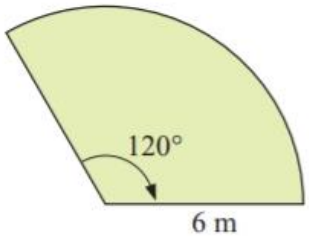
1 Find the area of the following figures, correct to 2 decimal places:

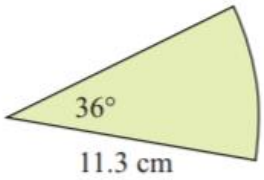
a 

b 

c 

d 

e 

f 

2 For a circle of diameter 2.6 cm find, correct to 2 decimal places:
   a its perimeter b its area.

3 A sprinkler sprays water in a circle with radius 3.4 m. Calculate the area of lawn it waters.

4 A goat is tethered to a post by a 5.4 m long rope. What area can the goat graze?

Answers

EXERCISE 10B

1 a 37.7 cm b 16.3 m c 19.5 cm

2 a 25.13 cm b 56.55 m c 45.24 km 3 $\approx$ 22.0 m

4 $\approx$ 15.7 m 5 a 251.3 cm b 25.13 km c 3979 times

6 a 25.71 cm b 27.00 cm c 23.42 cm d 31.42 cm
   e 348.50 m f 33.13 cm g 37.70 cm h 57.13 cm
   i 56.55 cm

EXERCISE 10D

1 a 153.94 cm^2 b 2463.01 cm^2 c 17 671.46 mm^2
   d 19.63 cm^2 e 37.70 m^2 f 40.11 cm^2

2 a 8.17 cm b 5.31 cm^2 3 36.3 m^2 4 91.6 m^2

5 a 55.0 cm^2 b 31.4 cm^2 c 20.0 m^2