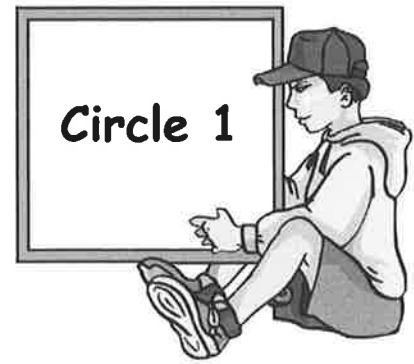


CHAPTER 10



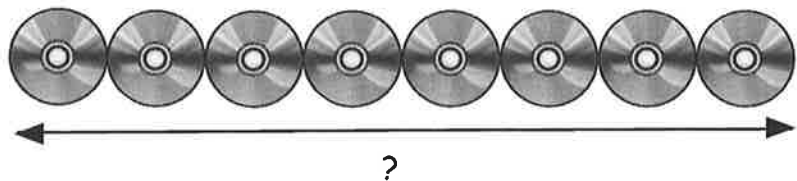
Exercise 1

Basic Circle Work



- Use any suitable object to draw a circle.
Show two separate diameters and radii on your circle.
- Draw another circle with a diameter and a radius.
Label all parts of your diagram.
- Write the length of the diameter for a radius of length :-
a 3 cm b 7 cm c 52 m d 8.5 km.
- Write the length of the radius for a diameter length of :-
a 12 cm b 56 cm c 1 m d 6.5 km.

- Eight CD's each with a 6 cm radius are placed end to end.
What is the total length ?

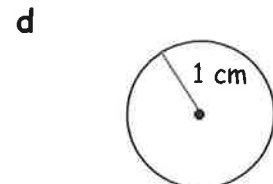
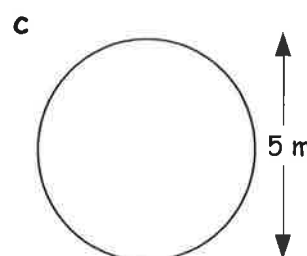
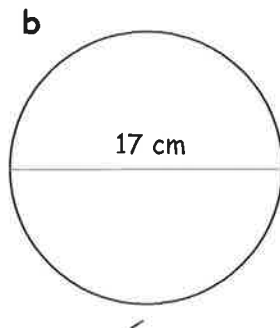
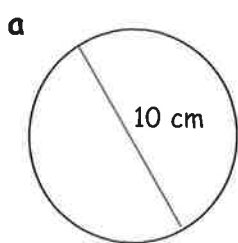


Exercise 2

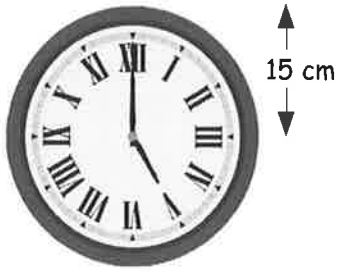
The Circumference (C) of a circle



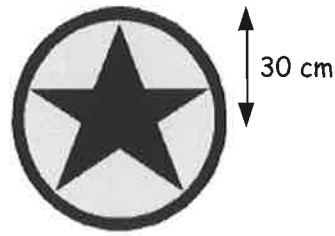
- Copy and complete,
" The formula for finding the circumference of a circle is $C = \dots\dots\dots$ "
- Find the circumference of each of the following circles :-



2. e



f



3. A satellite orbits 900 km above the earth.

Assuming the radius of the earth is 6350 km, calculate the distance the satellite travels in one orbit.



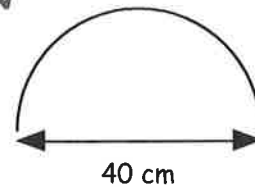
Exercise 3

Circle Problems

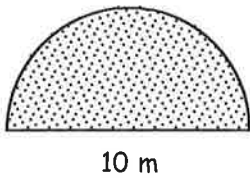


1. A metal strip is bent into a semi-circle with diameter 40 cm.

Find the length of the metal strip.



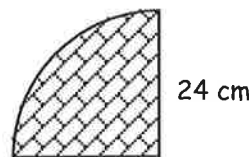
2. A garden is in the shape of a semi-circle with diameter 10 m. Calculate the **perimeter** of the garden.



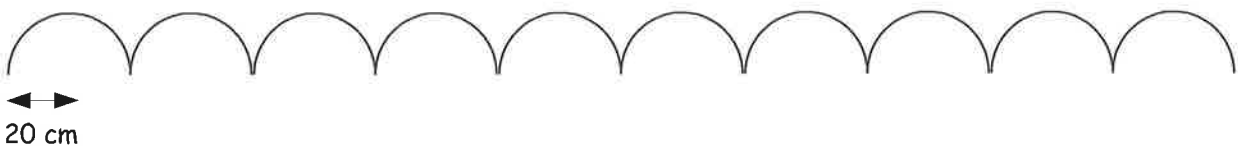
3. A kitchen tile has a quarter circle shape.

The tile has a 24 cm **radius**.

Calculate the **perimeter** of the tile.



4. A garden path has a fence made from metal poles bent into semi-circles. Each semi-circle has a radius of 20 cm.

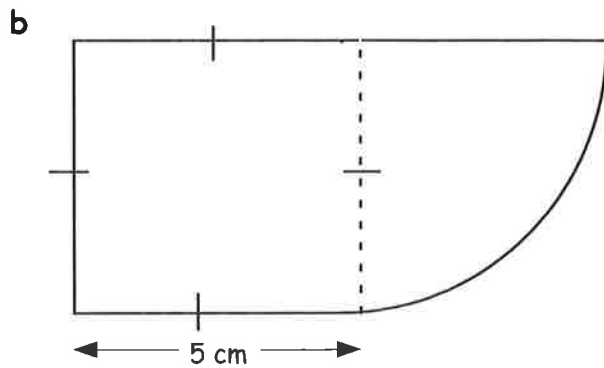
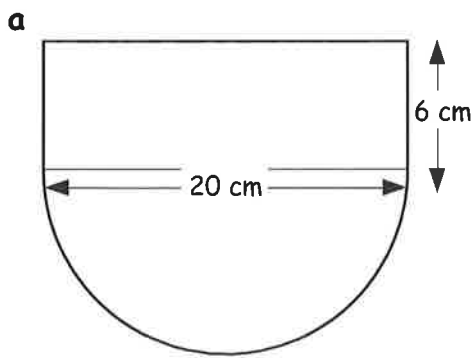


a Find the length of pole needed to make a fence 10 metres long.

b It costs £4.75 per metre for the metal pole.

If you must buy whole metre length only, how much will the fence cost ?

5. Calculate the perimeter of each composite shape below :-



Exercise 4

Finding the Diameter of a Circle



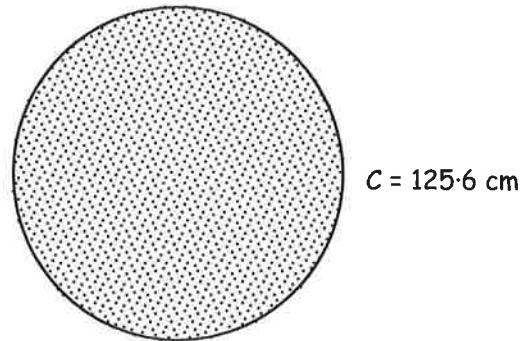
1. Find the diameter of a circle with circumference 125.6 cm.

Copy and complete :-

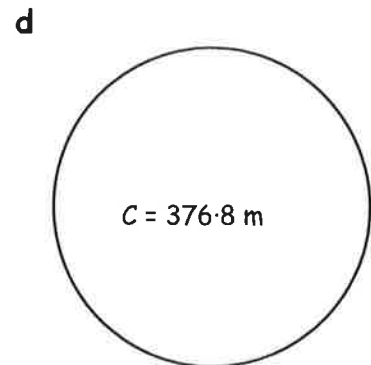
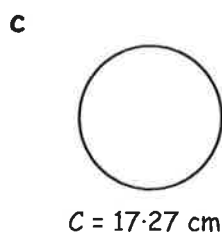
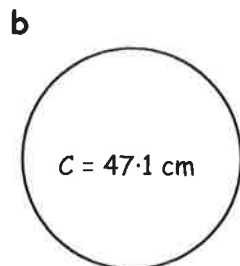
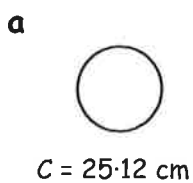
$$D = \frac{C}{\pi}$$

$$D = \frac{125.6}{3.14}$$

$$D = \dots$$

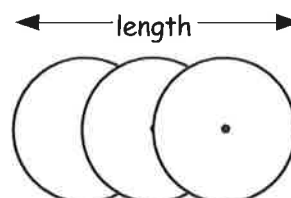


2. Calculate the diameter of each circle below :-



3. Find the **radius** of a circle with circumference 81.64 mm.

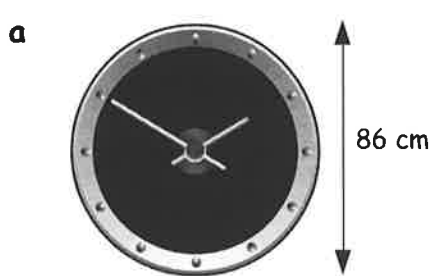
4. Three circles overlap at their centres as shown. Each circle has a circumference of 78.5 cm. Find the total length of the diagram.



Revisit - Review - Revise Exercise 10



1. Calculate the circumference of each of these :-



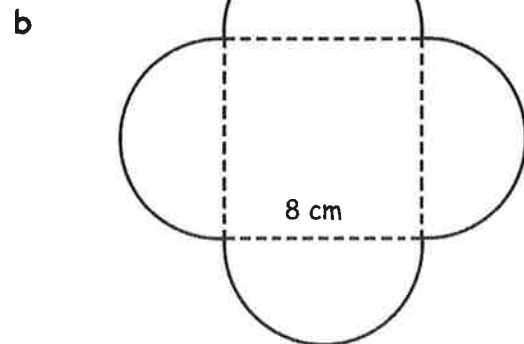
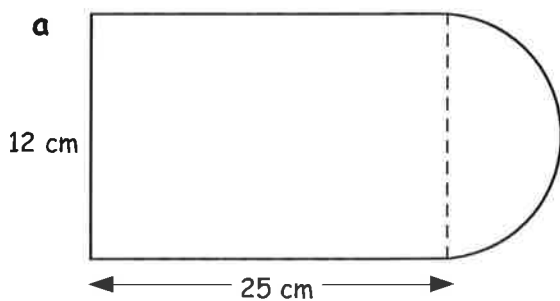
2. A semi-circular console table has a diameter of 1.2 metres.
Calculate the perimeter of the table top.



3. Calculate the radius of a circular garden which has a circumference of 172.7 metres.



4. Calculate the perimeter of each shape below :-



5. A fence is built from metal rods using quarter circles.

- Find the length of one of the quarter circles.
- Find the total length of metal needed to build the fence.
- At £6.50 per metre, find the total cost of the fence.
(Only sold in whole metre lengths).

