

MEASUREMENTS

Learning Objectives

- To understand the concepts of area and circumference of circle.
- To understand the area of circular and rectangular pathways.



2.1 Introduction

We have already studied that closed shapes such as rectangle and square having area and perimeter. Pasting of tiles on a wall, paving a parking lot with stones, fencing a field or ground etc., are some of the places where the knowledge of area and perimeter of rectangle are essential. In this chapter, we extend this concept to circles. The best example of a circle is the wheel. The invention of wheel is perhaps the greatest achievement of mankind.

The teacher shows the following pictures of wheel and asks questions as given below:



Fig. 2.1



Fig. 2.2

Teacher : Bharath, can you tell me what is the name of the picture given in Fig 2.1?

Bharath : Yes Sir/Madam, wheel of a bicycle.

Teacher : Sathish, would you tell me what is in Fig.2.2?

Sathish : Yes Sir/Madam, it is a wheel of a car.

Teacher : Suresh, will you name the shape of both figures?

Suresh : Yes Sir/Madam, they are circular in shape.

Teacher : Yes, you are right. Now Mary, will you tell me the distance covered by the wheel when it rotates once.

Mary : I don't know sir/madam.

Teacher : Ok, How do we measure the distance around the circle? We cannot measure the curves with the help of a ruler, as these shapes do not have straight edges. But there is a way to measure the distance around the circle. Mark a point on its boundary. Place the wheel on the floor in such a way that the marked point coincides with the floor. Take it as the initial point. Rotate the wheel once on