Covid 19 Sathi pasala - July 1st week - Grade 9

Circumference of a Circle

To recall your previous knowledge engage the review exercise in 18th lesson .

- Engage in the Activity 01.

- According to above activity complete the table in Activity 3. If you obtained your measurements accurately, you will get a value close to 3.1 for $\frac{c}{d}$.

*In any circle the value of $\frac{c}{d}$ is a constant. It is known as pie(π)

According to that,

$$\frac{c}{d} = \pi$$

$$(c = \pi d)$$

. The diameter is equal to two times of radius.

$$d = 2r$$

$$(\therefore c = 2\pi r)$$

In here we can consider the value of π as, $\pi = 3.14$ or $\pi = \frac{22}{7}$.

Consider the value of $\pi = \frac{22}{7}$

Example (1)

Find the circumference of the circle, if $r = 14\ cm$

$$C = 2\pi r$$

$$= 2 \times \frac{22}{7} \times 14$$

$$= 88cm$$

Example (2)

When $d = 3\frac{1}{2}cm$, find the circumference of the circle .

$C = \pi d$

$= \frac{22}{7} \times 3\frac{1}{2}$

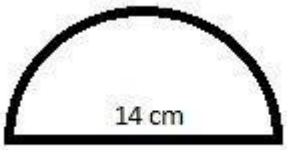
$= \frac{22}{7} \times \frac{7}{2} = 11cm$

Now engage in the exercise 18.1.

The Perimeter of semi- circular lamina.

Example (1)

Find the perimeter of following figure



Arc length of semi - circle $= \frac{1}{2}\pi d$

$= \frac{1}{2} \times \frac{22}{7} \times 14$

= 22 cm

Perimeter = Arc length +Diameter

= 22 + 14

= 36cm

Now you can engage in exercise 18.1 and 18.2.