

Q3- Write True or False =

a) $78^\circ = 1.36 \text{ rad}$

b) $720^\circ = 2\pi \text{ rad}$

c) $35^\circ > 0.5$

d) $1^\circ > 1$

So \rightarrow a) $78^\circ = \frac{78 \times \pi}{180} = 1.36 \text{ rad}$

\therefore True

b) $720^\circ = \frac{720 \times \pi}{180} = 4\pi \text{ rad}$

\therefore False

c) $35^\circ = \frac{35 \times \pi}{180} = 0.61 > 0.5$

\therefore True

d) $1^\circ = \frac{1 \times \pi}{180} = 0.017 < 1$

\therefore False

Q4- The radius of wheel of a car is 220 cm. By how much angle in degrees has the wheel rotated after it has travelled 300 m.

144- Given: radius of wheel = 220 cm

Distance travelled = 300 m = 30000 cm

In one rotation, distance travelled by car
 $= 2\pi r = 2\pi \times 220 = 440\pi$ cm

Let n be the no. of rotations of wheel,

$$\therefore n \times 440\pi = 30000$$

$$\Rightarrow n = 21.7$$

In one rotation, wheel turns by 360° .

$$\therefore \text{in } 21.7 \text{ rotations, } \theta = 7813^\circ$$