

TRIGONOMETRIC FUNCTIONS**INTRODUCTION OF TRIGONOMETRY FUNCTIONS****EXERCISE**

- Q.1** If the starting side extends beyond the terminal side, the angle is _____
(a) 0° (b) 180° (c) 90° (d) 270°
- Q.2** If rotation begins and, after completing one revolution, the starting side once again aligns with the terminal side, the resulting angle is _____.
(a) 0° (b) 180° (c) 90° (d) 360°
- Q.3** 1 radian is equal to.
(a) $54^\circ 48'$ (b) $57^\circ 16'$ (c) 180° (d) $17^\circ 46'$
- Q.4** What is the value of 1 degree in radian.
(a) π (b) 0.046 (c) 0.1746 (d) 0.01746
- Q.5** Change 4 radians into degree.
(a) 720° (b) $240^\circ 51' 53''$ (c) $229^\circ 10' 59''$ (d) $233^\circ 11' 48''$
- Q.6** If the arc angle measures 60 degrees, and the arc length is 20 cm, determine the radius of the circle from which the arc is intercepted.
(a) 18.08 cm (b) 17.07 cm (c) 19.09 cm (d) 18 cm
- Q.7** If the arc length is 40 cm and the radius of the circle containing the arc is 10 cm, calculate the angle formed by the arc.
(a) 720° (b) $240^\circ 51' 53''$ (c) $229^\circ 10' 59''$ (d) $233^\circ 11' 48''$
- Q.8** In a span of 40 seconds, the tip of the watch's second hand, which is 2 cm long, will cover a certain distance.
(a) 6.28 cm (b) 12.56 cm (c) 3.14 cm (d) 1.57 cm

- Q.9** If two circles have arcs of equal length that create central angles of 45° and 60° , determine the ratio of their radii.
- (a) 2:3 (b) 2:5 (c) 3:4 (d) 4:3
- Q.10** If the minute hand travels a distance of 24 cm in 30 minutes, what is the total length covered by the minute hand?
- (a) 19.1 cm (b) 38.2 cm (c) 57.3 cm (d) 45 cm

ANSWER KEY

1. (a)
2. (d)
3. (b)
4. (d)
5. (c)
6. (c)
7. (c)
8. (b)
9. (d)
10. (b)