Problem 45

It takes 2π radians (rad) to get around a circle, which is the same as 360°. How many radians are in 1°?

Solution

Write the conversion factor as a fraction with radians on top to find the number of radians in 1°.

$$\begin{aligned}\frac{2\pi \text{ radians}}{360 \text{ degrees}} &= \frac{2\pi}{360}\,\frac{\text{radians}}{\text{degrees}} \\ &\approx 0.0175\,\frac{\text{radians}}{\text{degrees}}\end{aligned}$$

Therefore, there are roughly 0.0175 radians per degree.