



Measurement Of Angles Ex 4.1 Q1

(i) $\frac{9\pi}{5}$

We have,

$$\pi \text{ radians} = 180^\circ$$

$$1^c = \left\{ \frac{180}{\pi} \right\}^0$$

Now,

$$\begin{aligned} \left(\frac{9\pi}{5} \times \frac{180}{\pi} \right)^0 \\ = 324^\circ \end{aligned}$$

(ii) $\frac{-5\pi}{6}$

We have,

$$\pi \text{ radians} = 180^\circ$$

$$1^c = \left(\frac{180}{\pi} \right)^0$$

Now,

$$\left(\frac{-5\pi}{6} \right)^c = \left(\frac{-5\pi}{6} \times \frac{180}{\pi} \right)^0 = -150^\circ$$

(iii) $\left(\frac{18\pi}{5} \right)^c$

We have,

$$\pi \text{ radians} = 180^\circ$$

$$1^c = \left(\frac{180}{\pi} \right)^0$$

Now,

$$\begin{aligned} \left(\frac{18\pi}{5} \right)^c &= \left(\frac{18\pi}{5} \times \frac{180}{\pi} \right)^0 \\ &= 648^\circ \end{aligned}$$

(iv) We have,

$$\pi \text{ radians} = 180^\circ$$

$$1^c = \left(\frac{180}{\pi} \right)^0$$

Now,

$$\begin{aligned}
 (-3)^c &= \left(-3 \times \frac{180}{\pi}\right)^0 \\
 &= \left(\frac{180}{22} \times 7 \times -3\right)^0 \\
 &= \left(-171 \frac{9}{11}\right)^0 \\
 &= -171^0 \left(\frac{9}{11} \times 60\right)^1 \\
 &= -171^0 49^1 5^{11}
 \end{aligned}$$

(v) We have,

$$\pi \text{ radians} = 180^0$$

$$1^c = \left(\frac{180}{\pi}\right)^0$$

Now,

$$\begin{aligned}
 (11)^c &= \left(11 \times \frac{180}{\pi}\right)^0 \\
 &= \left(11 \times 180 \times \frac{7}{22}\right)^0 \\
 &= 630^0
 \end{aligned}$$

(vi) We have,

$$\pi \text{ radians} = 180^0$$

$$1^e = \left(\frac{180}{\pi}\right)^0$$

Now,

$$\begin{aligned}
 1^e &= \left(1 \times \frac{180}{\pi}\right)^0 \\
 &= 1 \times \frac{180 \times 7}{22} \\
 &= 57^0 \left(\frac{3}{11} \times 60\right) \\
 &= 57^0 16^1 \left(\frac{4}{11} \times 60\right)^{11} \\
 &= 57^0 16^1 21^{11}
 \end{aligned}$$

Measurement Of Angles Ex 4.1 Q2

(i) 300°

We have,

$$180^\circ = \pi^c$$

$$\therefore 1^\circ = \left(\frac{\pi}{180}\right)^c$$

Now,

$$300^\circ = 300 \times \frac{\pi}{180} = \frac{5\pi}{3}$$

(ii) 35°

We have,

$$180^\circ = \pi^c$$

$$\therefore 1^\circ = \left(\frac{\pi}{180}\right)^c$$

Now,

$$35^\circ = 35 \times \frac{\pi}{180} = \frac{7\pi}{36}$$

(iii) -56°

We have,

$$180^\circ = \pi^c$$

$$\therefore 1^\circ = \left(\frac{\pi}{180}\right)^c$$

Now,

$$-56^\circ = -56 \times \frac{\pi}{180} = \frac{-14\pi}{45}$$

(iv) 135°

We have,

$$180^\circ = \pi^c$$

$$\therefore 1^\circ = \left(\frac{\pi}{180}\right)^c$$

Now,

$$135^\circ = 135 \times \frac{\pi}{180} = \frac{3\pi}{4}$$

(v) -300°

We have,

$$180^\circ = \pi^c$$

$$\therefore 1^\circ = \left(\frac{\pi}{180}\right)^c$$

Now,

$$-300^\circ = -300 \times \frac{\pi}{180} = \frac{-5\pi}{3}$$

(vi) $7^\circ 30^1$

We have,

$$180^\circ = \pi^c$$

$$\therefore 1^\circ = \left(\frac{\pi}{180}\right)^c$$

$$\begin{aligned} 7^\circ 30^1 &= \left(7 \times \frac{\pi}{180}\right)^c \times \left(\frac{30}{60}\right)^0 \\ &= \left(7 \frac{1}{2}\right)^0 \times \left(\frac{\pi}{180}\right)^c \\ &= \left(\frac{15}{2} \times \frac{\pi}{180}\right)^c \\ &= \frac{\pi}{24} \end{aligned}$$

(vii) $125^\circ 30^1$

We have,

$$180^\circ = \pi^c$$

$$\therefore 1^\circ = \left(\frac{\pi}{180}\right)^c$$

$$\begin{aligned} 125^\circ 30^1 &= 125^\circ \left(\frac{30}{60}\right)^0 \\ &= \left(125 \frac{1}{2}\right)^0 \\ &= \left(\frac{251}{2} \times \frac{\pi}{180}\right)^c = \frac{251\pi}{360} \end{aligned}$$

(viii) $-47^\circ 30^1$

We have,

$$180^\circ = \pi^c$$

$$\therefore 1^\circ = \left(\frac{\pi}{180}\right)^c$$

$$\begin{aligned} -47^\circ 30^1 &= -47^\circ \left(\frac{30}{60}\right)^0 \\ &= \left(-47 \frac{1}{2}\right)^0 \\ &= \left(\frac{-95}{2}\right)^0 \\ &= \left(\frac{-95}{2} \times \frac{\pi}{180}\right)^c \\ &= \frac{-19\pi}{72} \end{aligned}$$

***** END *****

