

۱- $۲۷^\circ = (x) \text{ rad}$ $\frac{۲۷^\circ}{180^\circ} = \frac{x}{\pi}$ $\rightarrow \frac{۲۷\pi}{180} = x$

۲- $۱۲^\circ = (x) \text{ rad}$ $\frac{۱۲^\circ}{180^\circ} = \frac{x}{\pi}$ $\rightarrow \frac{۱۲\pi}{180} = x$

۳- $\frac{5\pi}{14} \text{ rad} = (x)^\circ$ $\frac{\frac{5\pi}{14}}{\pi} = \frac{x}{180}$ $\rightarrow \frac{5}{14} = \frac{x}{180}$ $\rightarrow x = 127^\circ$

۴- $\frac{\pi}{9} \text{ rad} = (x)^\circ$ $\frac{\frac{\pi}{9}}{\pi} = \frac{x}{180}$ $\rightarrow \frac{1}{9} = \frac{x}{180}$ $\rightarrow x = 20^\circ$

۵- $\left[\frac{(100^\circ)}{\left(\frac{140\alpha}{9}\right) G} - \frac{\frac{140\alpha}{9}}{\frac{100}{1}} \right] = \frac{140\alpha}{1100} = \frac{5\alpha}{144} = \frac{D - (14, 5\alpha)^\circ}{110}$
 $\frac{\left(\frac{5\pi}{14}\right) \text{ rad}}{\frac{\pi}{1}} = \frac{\alpha}{1} = \frac{D}{180} \rightarrow (14, 5\alpha)^\circ$

$\alpha(10 + 14, 5 + 14, 5) = 140\alpha = 180^\circ \rightarrow \alpha = 12^\circ$

۶- $\frac{\sqrt{\mu}}{\mu} \times \frac{1}{\mu} = \frac{\sqrt{\mu}}{\mu}$
 $\frac{1}{\mu} + \frac{\sqrt{\mu}}{\mu} = \frac{\sqrt{\mu}}{\mu}$
 $\frac{1}{\mu} + \frac{\sqrt{\mu}}{\mu} = \frac{\sqrt{\mu}}{\mu} \rightarrow \tan^2 \theta + 1 = \sec^2 \theta \rightarrow \tan^2 \theta = \sec^2 \theta - 1$

۷- $\frac{\tan^2 \theta + 1}{\sec^2 \theta - 1} = \frac{\frac{1}{\mu} + 1 + \mu}{\frac{1}{\mu} - 1} = \frac{\frac{1+\mu}{\mu}}{\frac{1-\mu}{\mu}} = \frac{1+\mu}{1-\mu}$
 $\frac{1+\mu}{1-\mu} \times \frac{\sqrt{\mu}}{\sqrt{\mu}} = \frac{(1+\mu)\sqrt{\mu}}{\mu}$

$0^\circ < \theta < 90^\circ$

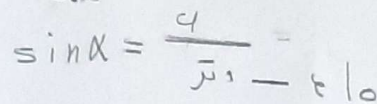
۸- $-\sin \theta_0 \cos \theta_0 + \cos \theta_0 \sin \theta_0 = \sin^2 \theta$
 $\frac{-1}{\mu} \times \frac{1}{\mu} = \frac{-1}{\mu}$
 $\frac{\sqrt{\mu}}{\mu} \times \frac{\sqrt{\mu}}{\mu} = \frac{\mu}{\mu}$

$\sin^2 \theta = \frac{1}{\mu}$
 $\sqrt{\sin^2 \theta} = \sqrt{\frac{1}{\mu}}$
 $\sin \theta = \frac{1}{\sqrt{\mu}}$
 $\theta = \theta_0$

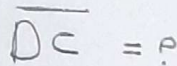
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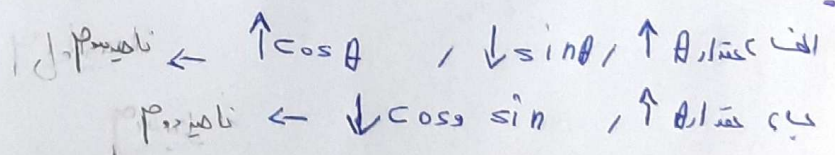
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$$9 + V + 10 + V + 1 = 31$$



$$\begin{aligned} 100 - V\omega &= P\omega - r\omega = \overline{AB} \\ \cos 60^\circ &= \frac{\sqrt{4}}{4} = \frac{\overline{AB}}{\overline{AC}} \Rightarrow \overline{AC} = \frac{10}{\sqrt{3}} = \frac{10\sqrt{3}}{3} \\ \sin 60^\circ &= \frac{\sqrt{3}}{4} = \frac{\overline{BC}}{\overline{AC}} \Rightarrow \overline{BC} = \frac{10}{2} = 5 \end{aligned}$$



$$\sin x = p$$

