

الف) $2\sqrt{3} = (\alpha) \text{ rad} \Rightarrow \frac{D}{11.0} = \frac{\text{rad}}{\pi} \Rightarrow \frac{2\sqrt{3}}{11.0} = \frac{\text{Rad}}{\pi} \Rightarrow \text{rad} = \frac{2\sqrt{3}}{11.0} \pi$

ب) $120 = (\alpha) \text{ rad} \Rightarrow \frac{D}{11.0} = \frac{\text{rad}}{\pi} \Rightarrow \frac{120}{11.0} = \frac{\text{rad}}{\pi} \Rightarrow \text{rad} = \frac{120}{11.0} \pi$

ج) $\frac{5\pi}{12} \text{ rad} = (\alpha) \Rightarrow \frac{D}{11.0} = \frac{\text{rad}}{\pi} \Rightarrow \frac{D}{11.0} = \frac{\frac{5\pi}{12}}{\pi} \Rightarrow D = 11.0 \times \frac{5}{12}$

د) $\frac{5\pi}{9} \text{ rad} = (\alpha) \Rightarrow \frac{D}{11.0} = \frac{\text{rad}}{\pi} \Rightarrow \frac{D}{11.0} = \frac{\frac{5\pi}{9}}{\pi} \Rightarrow D = 11.0 \times \frac{5}{9}$

$\frac{D}{11.0} = \frac{6}{100} = \frac{\text{Rad}}{\pi} \Rightarrow$

$\frac{D}{11.0} = \frac{120\alpha}{9} \Rightarrow$

(سوال ٢)

$\frac{D}{11.0} = \frac{\frac{5\pi}{9}}{\pi} \Rightarrow D = 11.0 \times \frac{5}{9}$

$D = \frac{100 \times 120\alpha}{100} = 120\alpha$

$10\alpha + 120\alpha + 120\alpha = 11.0$

$250\alpha = 11.0 \Rightarrow \alpha = 2^\circ$

الف) $\cos 45^\circ \cdot \cos 45^\circ - \sin 45^\circ \cdot \sin 45^\circ - \tan 45^\circ \cdot \cot 45^\circ$

(سوال ٣)

$\frac{1}{\sqrt{2}} \cdot \frac{\sqrt{2}}{2} - \left(\frac{\sqrt{2}}{2} \cdot \frac{1}{\sqrt{2}} \right) - 1 + 2(1) = 1$

ب) $\frac{\tan^2 45^\circ + \tan^2 45^\circ + \tan^2 45^\circ}{\cot 45^\circ - \cot 45^\circ} = \frac{\left(\frac{\sqrt{2}}{2}\right)^2 + (1)^2 + \left(\frac{\sqrt{2}}{2}\right)^2}{\frac{\sqrt{2}}{2} - \frac{\sqrt{2}}{2}} = \frac{\frac{2}{4} + 1 + \frac{2}{4}}{0} = \frac{\frac{3}{2} + 1 + \frac{3}{2}}{0} = \frac{3 + 2 + 3}{0} = \frac{8}{0}$

$\frac{11\sqrt{2}\sqrt{2}}{11\sqrt{2} \times \sqrt{2}} = \frac{11\sqrt{2}\sqrt{2}}{22} = \frac{11 \times 2}{22} = 1$

$-\sin 45^\circ \cdot \cos 45^\circ + \cos 45^\circ \cdot \sin 45^\circ = \sin^2 \theta$
 $-\frac{1}{\sqrt{2}} \cdot \frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} \cdot \frac{1}{\sqrt{2}} = \left(-\frac{1}{2}\right) + \frac{1}{2} \Rightarrow \frac{1}{2} \Rightarrow \sin^2 \theta$

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

(سوال ٤)
 $\theta < 90^\circ$
 $\theta = 45^\circ$

$\tan 45^\circ = \frac{\sqrt{2}}{\frac{1}{\sqrt{2}}} = 2$

$$\frac{\tan^2 \alpha (1 - \tan^2 \alpha)}{(1 - \cot^2 \alpha)^2} = \tan \theta \Rightarrow \frac{r \left(\frac{\sqrt{3}}{4}\right) \left(\frac{4}{9}\right)}{\frac{36}{81}} = \frac{\frac{\sqrt{3}}{9}}{\frac{36}{81}} = \frac{\sqrt{3}}{4}$$

$$1 - \frac{3}{9} = \left(\frac{4}{9}\right)^2 \Rightarrow \frac{36}{81} \quad 1 - \frac{3}{9} = \frac{6}{9}$$

$$\frac{4}{11} = \frac{\text{rad}}{\pi} \Rightarrow \text{rad} = \frac{\pi}{3}$$

$$\frac{\sin}{\cos} = \Delta \Rightarrow \sin = \Delta \cos$$

$$\frac{3 \sin \theta - \cos \theta}{\sin \theta - 8 \cos \theta}$$

$$\frac{12 \cos \theta \cos \theta}{\Delta \cos \theta - 8 \cos \theta} = \frac{12 \cos \theta}{\cos \theta}$$

tan = Δ

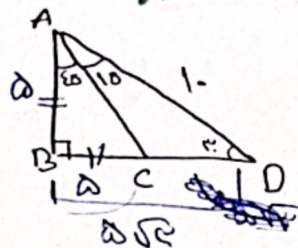
$$\sin \alpha = \frac{6}{10}$$

$$\frac{\text{مقابل}}{\text{مجار}} = \frac{6}{10}$$



$$6^2 + 8^2 = 10^2$$

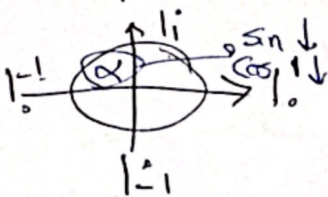
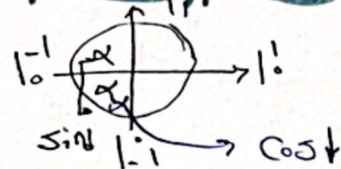
$$1 + 7 + 7 + 1 + 6 = 38$$



$$\sin 30^\circ = \frac{AB}{10} \Rightarrow \frac{1}{2} = \frac{AB}{10} \Rightarrow AB = 5$$

$$\cos 30^\circ = \frac{BD}{10} \Rightarrow \frac{\sqrt{3}}{2} = \frac{BD}{10} \Rightarrow BD = 5\sqrt{3}$$

$$DC = 5 - 5\sqrt{3} \Rightarrow 5(1 - \sqrt{3})$$



$$\tan = \frac{1}{c} \Rightarrow \frac{\sin}{\cos} = \frac{1}{c}$$



$$\frac{\text{مقابل}}{\text{مجار}} = \frac{1}{c}$$

$$y^2 = 1^2 + c^2 \Rightarrow y^2 = 1 + c^2$$

$$\sin = \frac{1}{\sqrt{1+c^2}}$$