

$$-\sin 30^\circ \cos 50^\circ + \cos 30^\circ \sin 50^\circ = \sin 20^\circ \quad (15)$$

$$\left(-\frac{1}{2} \times \frac{1}{2}\right) + \left(\frac{\sqrt{3}}{2} \times \frac{\sqrt{3}}{2}\right) = \frac{1}{2} = \sin 20^\circ \quad (11\omega)$$

$$\sin^2 \theta + \cos^2 \theta = 1 \rightarrow \cos^2 \theta = \frac{1}{4}$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{\frac{1}{2}}{\frac{1}{2}} = 1 \quad \tan \theta = \pm 1$$

$\tan \theta = 1$ $\theta = 45^\circ$ لقد وجدنا من قبل

$$\frac{2 \tan 30^\circ (1 - \tan^2 30^\circ)}{1 - \cot^2 30^\circ} = \quad (10\omega) \quad (5)$$

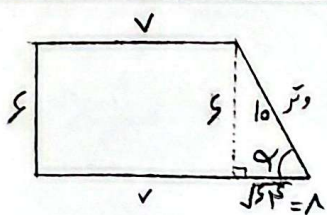
$$\frac{2 \frac{\sqrt{3}}{3} (1 - (\frac{\sqrt{3}}{3})^2)}{1 - (\frac{\sqrt{3}}{3})^2} = \frac{2 \frac{\sqrt{3}}{3} (1 - \frac{1}{3})}{1 - \frac{1}{3}} = \frac{2 \frac{\sqrt{3}}{3} \cdot \frac{2}{3}}{\frac{2}{3}} = 2 \frac{\sqrt{3}}{3} = \sqrt{3}$$

$$\tan \theta = 5$$

$$\frac{5 \sin \theta - \cos \theta}{\sin \theta - 5 \cos \theta} = \frac{5 \tan \theta - 1}{\tan \theta - 5}$$

$$\frac{5 \times 5 - 1}{5 - 5} = \quad (15)$$

$$115\omega$$

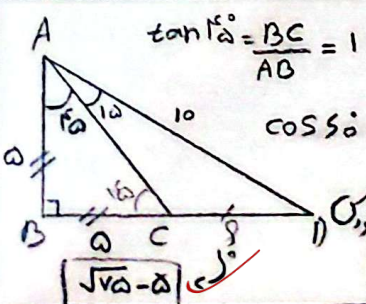


$$\sin \alpha = \frac{5}{10}$$

$$\frac{\sin \alpha}{\sin 30^\circ} = \frac{5}{10} = \frac{5}{5 \sin 30^\circ} \rightarrow \alpha = 30^\circ$$

$$10^2 = 5^2 + Q^2 \rightarrow \sqrt{5^2} = 5$$

$$38 = 5 + 10 + 10 + 5 = \text{محيط}$$



$$\tan 45^\circ = \frac{BC}{AB} = 1$$

$$\cos 50^\circ = \frac{AB}{10} = \frac{1}{2} \rightarrow AB = 5$$

$$100 - 25 = BD^2 \rightarrow BD = \sqrt{75} = 5\sqrt{3}$$

10 A 10 A 10 A

$$\frac{2\sqrt{3}}{180} = \frac{1}{\pi} \rightarrow \frac{2\sqrt{3}\pi}{180} \quad (الف) \quad (1)$$

$$\frac{2\sqrt{3}}{180} = \frac{1}{\pi} \rightarrow \frac{2\sqrt{3}\pi}{180} \quad (ب)$$

$$\frac{2\sqrt{3}}{180} = \frac{1}{\pi} \rightarrow \frac{2\sqrt{3}\pi}{180} \quad (ج) \quad (2)$$

$$\frac{2\sqrt{3}}{180} = \frac{1}{\pi} \rightarrow \frac{2\sqrt{3}\pi}{180} \quad (د)$$

$$\frac{125\alpha}{9} = \frac{5\alpha}{12} = \frac{125\alpha}{180} \quad (2)$$

$$\frac{2\pi}{1} = \frac{125\alpha}{180}$$

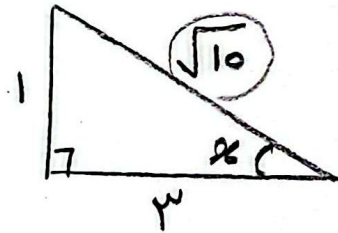
$$\frac{125\alpha}{180} + \frac{125\alpha}{180} + 10\alpha = 125\alpha = 180^\circ \rightarrow \alpha = 1.44^\circ$$

$$\left(\frac{1}{2} \times \frac{\sqrt{3}}{2}\right) - \left(\frac{\sqrt{3}}{2} \times \frac{1}{2}\right) - 1 + 2 = \frac{\sqrt{3}}{4} - \frac{\sqrt{3}}{4} - 1 + 2 = 1 \quad (الف) \quad (3)$$

$$\frac{\left(\frac{\sqrt{3}}{2}\right)^2 + 1 + \left(\frac{\sqrt{3}}{2}\right)^2}{\sqrt{3} - \frac{\sqrt{3}}{2}} = \frac{\frac{3}{4} + 1 + \frac{3}{4}}{\frac{2\sqrt{3}}{2} - \frac{\sqrt{3}}{2}} = \frac{\frac{5}{2}}{\frac{\sqrt{3}}{2}} = \frac{5\sqrt{3}}{\sqrt{3}} = 5$$

انف) ناصب سوم (۹)
 حاصل P (۵۱۵)
 ب) ناصب ۲

$$\tan \alpha = \frac{1}{3}$$



$$\sin \alpha = \frac{\text{مقابل}}{\text{وتر}} = \frac{1}{\sqrt{10}} = \frac{\sqrt{10}}{10}$$

$$\boxed{-\frac{\sqrt{10}}{10}}$$

چون ناصب ۲