

$$120^\circ = (x) \text{ rad} \rightarrow \frac{120}{180} = \frac{x \text{ rad}}{\pi} \rightarrow \frac{2\pi}{3}$$

$$135^\circ = (x) \text{ rad} \rightarrow \frac{135}{180} = \frac{x \text{ rad}}{\pi} \rightarrow \frac{3\pi}{4}$$

$$45^\circ = (x)^\circ \rightarrow \frac{45}{180} = \frac{x}{180} = \frac{45}{180} \times \frac{\pi}{180} = \frac{\pi}{4}$$

$$30^\circ = (x)^\circ \rightarrow \frac{30}{180} = \frac{x}{180} \rightarrow 10^\circ$$

$$\frac{120a}{9} = \frac{120}{180} \sim \frac{120a}{9} \times 9 = \frac{120}{1} a$$

$$\text{نیرب } \frac{9\pi}{180} \text{ و } \frac{120a}{9}$$

$$\frac{9\pi}{180} = \frac{120}{180} \sim \frac{a}{180} \times 180 = \frac{120a}{1}$$

$$\Rightarrow 120a + \frac{120a}{1} + \frac{45a}{1} = 180$$

$$\frac{120a}{1} = 180 \Rightarrow [a = 1.5]$$

$$\cos 45^\circ \cos 30^\circ - \sin 45^\circ \sin 30^\circ - \tan 45^\circ + \tan 30^\circ = 1$$

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

$$\frac{\tan 135^\circ + \tan 135^\circ + \tan 45^\circ}{\tan 135^\circ - \tan 135^\circ} = \frac{\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}}}{\frac{1}{\sqrt{2}} - \frac{1}{\sqrt{2}}} = \frac{\frac{2}{\sqrt{2}}}{\frac{0}{\sqrt{2}}} = \frac{2}{0} = \frac{2\sqrt{2}}{0} = \frac{2\sqrt{2}}{0}$$

$$-\sin 135^\circ \cos 45^\circ + \cos 135^\circ \sin 45^\circ = \sin 2\theta$$

$$-\frac{1}{\sqrt{2}} \times \frac{1}{\sqrt{2}} + \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} = \sin 2\theta \sim -\frac{1}{2} + \frac{2}{2} = \frac{1}{2} = \frac{1}{2} \rightarrow \sin 2\theta = \frac{1}{2}$$

$$\tan 2\theta = \frac{1}{\sqrt{3}}$$

$$\sin \theta = \sqrt{\frac{1}{2}} \sim \pm \frac{1}{\sqrt{2}} = \pm \frac{\sqrt{2}}{2} \Rightarrow \tan \theta = \pm 1$$

$$\frac{1 \tan 135^\circ (1 - \tan 135^\circ)}{(1 - \tan 135^\circ)^2} = \tan \theta$$

$$\frac{\frac{1}{\sqrt{2}} \times \frac{1}{\sqrt{2}}}{\frac{0}{2}} = \frac{\frac{1}{2}}{0} = \frac{1}{0} = \frac{1}{0}$$

$$\frac{\frac{1}{2}}{0} = \frac{1}{0} = \frac{1}{0}$$

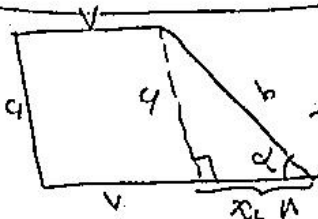
$$\tan \theta = \frac{1}{\sqrt{3}}$$

$$\theta = 30^\circ \rightarrow \frac{30}{180} = \frac{\pi}{6}$$

$$[a = \frac{\pi}{6}]$$

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

$$\tan \theta = 0 \quad (4)$$



$$x^2 = 100 - 44 = x = 8$$

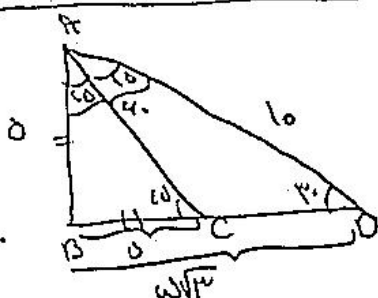
$$P = 4 + 12 + 11 + 10 = 37$$

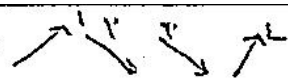
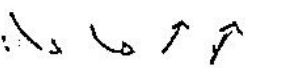
$$\sin \theta = \frac{4}{10}$$

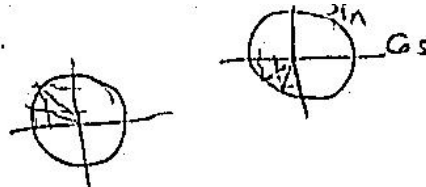
$$\sin \theta = \frac{4}{10} \Rightarrow y = 0$$

$$\frac{\sqrt{2}}{2} \sin 45^\circ = \frac{1}{2} \Rightarrow \frac{\sqrt{2}}{2} \times \frac{1}{2} = \frac{1}{2} \Rightarrow \frac{\sqrt{2}}{2} = 1$$

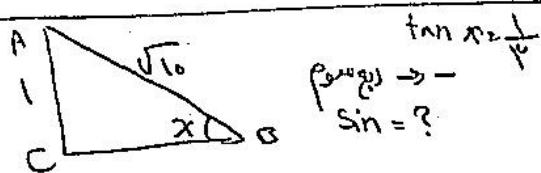
$$CD = BD - BC = \sqrt{2} - 1$$



$\sin :$ 
 $\cos :$ 



الف) ربع دوم
 ب) ربع دوم



$$\begin{aligned}
 AB &= \sqrt{1+9} = \sqrt{10} \\
 \sin &= -\frac{1}{\sqrt{10}} = -\frac{\sqrt{10}}{10}
 \end{aligned}$$

6