

$$\frac{(ax - \frac{\sqrt{3}}{2}) + (bx - \frac{\sqrt{3}}{2})}{(ax - \frac{1}{2}) + (bx - \frac{1}{2})} = \frac{\sqrt{3}}{2} \rightarrow \frac{a\sqrt{3} + b\sqrt{3}}{a+b} = \frac{1}{\sqrt{3}} \rightarrow$$

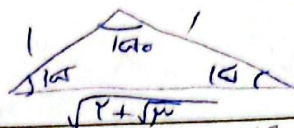
$$-a-b = \sqrt{3}a + \sqrt{3}b \rightarrow \varepsilon a = -\varepsilon b \rightarrow a = -b \rightarrow \frac{b}{a} = -1$$

$$P = (4, y) \rightarrow \cos P = \frac{1}{2} \rightarrow P = \frac{\pi}{3} \rightarrow y = \frac{\sqrt{3}}{2} \quad \frac{D}{110} = \frac{\text{Rad}}{\pi} \quad D = 210$$

$$\text{Rad} = \frac{\sqrt{3}\pi}{2} \rightarrow P' = \frac{\sqrt{3}\pi}{2} + \frac{\pi}{6} = \frac{3\pi}{4}$$

$$PP' = \sqrt{1+1-(2 \times 1 \times 1 \times \cos 45^\circ)} = \sqrt{2+\sqrt{2}}$$

$$\text{مساحت: } 1 + 1 + \sqrt{2+\sqrt{2}} = 2 + \sqrt{2+\sqrt{2}}$$



قضیه کسینوس ها:

محورهای سائیت همکار در هر سائیت $\frac{\pi}{6} = 30^\circ$ میگویند در $\frac{\pi}{9}$ میگوید $\frac{\pi}{3}$ از سائیت

$$\lim_{x \rightarrow \frac{\pi}{3}} x = \lim_{x \rightarrow \frac{\pi}{3}} x$$

$$|\frac{1}{2}m - 90| = 20 \rightarrow \frac{1}{2}m - 90 = 20 \rightarrow m = 20$$

$$\rightarrow \frac{1}{2}m - 90 = -20 \rightarrow m = 140$$

بهر از ۲۰ دقیقه برای بار دوم ۲۰ درجه خواهد شد

$$-\frac{\pi}{6} < \alpha \leq \frac{5\pi}{6} \rightarrow -\frac{1}{2} < \sin \alpha \leq 1 \rightarrow -\frac{1}{2} < \frac{m-3}{5} \leq 1$$

$$\rightarrow -5/2 < m-3 \leq 5 \rightarrow \frac{1}{2} < m \leq 1 \rightarrow m \text{ کسینوس ۱ عدد صحیح}$$



$$\frac{\cos \alpha + k(-\sin \alpha)}{-\cos \alpha - \gamma \sin \alpha} = \mu \frac{-\cos \alpha}{-1 - \gamma \tan \alpha} = \mu \frac{1 - k \tan \alpha}{-1 - \gamma \tan \alpha} = \mu \frac{\tan \alpha - 0.15}{-1 - \gamma \tan \alpha}$$

$$\frac{1 - 0.15k}{-1 - \gamma \tan \alpha} = \mu \rightarrow 1 - 0.15k = -\epsilon \alpha \rightarrow 0.15k = \alpha \alpha \rightarrow k = \mu$$

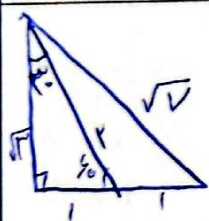
$$1 - \cos \alpha = \gamma + \gamma \cos \alpha \rightarrow \cos \alpha = \frac{-\gamma}{1 + \gamma} = \frac{-\gamma}{1 + \gamma} \cdot \frac{\cot \alpha + \cot \alpha}{\tan \alpha - \gamma \tan \alpha} = \frac{\gamma \cot \alpha}{1 - \gamma \tan \alpha}$$

$$1 + \tan^2 \alpha = \frac{1}{\cos^2 \alpha} \rightarrow \tan^2 \alpha = \frac{1}{\cos^2 \alpha} - 1 \rightarrow \tan \alpha = -\sqrt{1 - \cos^2 \alpha}$$

$$\rightarrow \cot \alpha = -\frac{1}{\sqrt{1 - \cos^2 \alpha}} \rightarrow \frac{\gamma \cot \alpha}{1 - \gamma \tan \alpha} = \frac{-\gamma}{-1 - \gamma \tan \alpha} = -\frac{1}{\epsilon}$$

$$\frac{D}{V_0} = \frac{\text{Rad}}{\pi} \rightarrow D = \frac{V_0}{\pi} \text{ Rad} = \frac{V_0}{\pi} \pi \quad \alpha_A R_A = \alpha_B R_B \rightarrow$$

$$\frac{6}{10} \pi R_A = \frac{9}{10} \pi R_B \rightarrow \frac{R_A}{R_B} = \frac{3}{2} \rightarrow \frac{S_A}{S_B} = \frac{\pi R_A^2}{\pi R_B^2} = \frac{9}{4}$$



$$\frac{\sin \alpha}{BD} = \frac{\sin 90^\circ}{AB} \rightarrow AB = \sqrt{2} \quad AC = \sqrt{1+1} = \sqrt{2}$$

$$AD = \sqrt{1+1} = \sqrt{2} \quad S_{ABC} = \frac{1}{2} \times \sqrt{2} \times \sqrt{2} \times \sin 90^\circ = 1$$

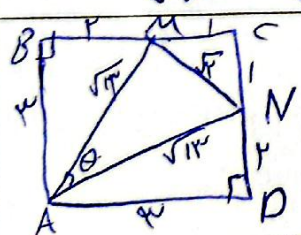
$$\rightarrow BC = 1 \rightarrow DC = 1$$

$$\frac{\sin \alpha}{\sqrt{2}} = \frac{\sin C}{1} \rightarrow \sin C = \frac{\sqrt{2}}{2}$$

$$\sin^2 C + \cos^2 C = 1 \rightarrow \cos C = \frac{1}{\sqrt{2}}$$

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

$$\sin \alpha = \frac{1}{\sqrt{2}} \cos C = \frac{1}{2}$$



$$\text{فيضاثل: } MN : \sqrt{2}$$

$$MA = NA = \sqrt{2}$$

$$\sqrt{2} = \sqrt{1^2 + 1^2} - (1 \times 1 \times \cos \theta) \rightarrow \cos \theta = \frac{1}{2}$$

$$\sin^2 \theta + \cos^2 \theta = 1 \rightarrow \sin \theta = \sqrt{1 - \frac{1}{4}} = \frac{\sqrt{3}}{2}$$