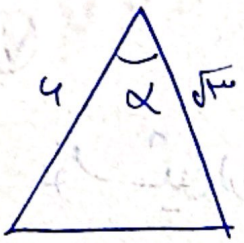
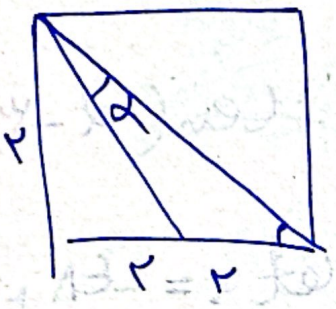


$$S = \frac{1}{2} \times 4 \times \sqrt{3} \times \sin\alpha = \frac{9}{2} \quad (1)$$

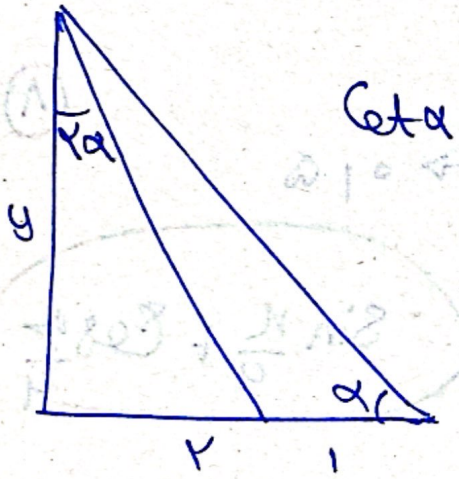
$$\sin\alpha = \frac{\sqrt{3}}{2} \begin{cases} \alpha = 120 \\ \alpha = 90 \end{cases}$$

نوشتن اوایل



$$\tan(\alpha + 45) = \frac{\tan\alpha + 1}{-\tan\alpha + 1} = 2 \quad (2)$$

$$\cot\alpha = 3$$



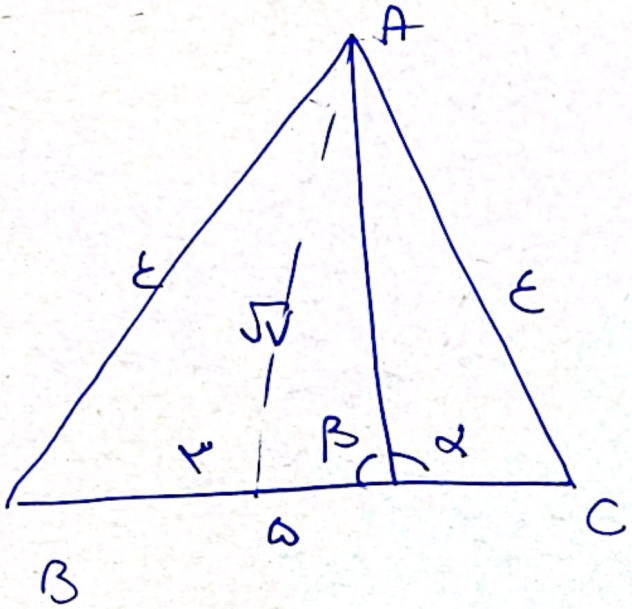
(3)

$$\cot\alpha = \frac{3}{y}$$

$$\cot^2\alpha = \frac{\cot^2\alpha - 1}{2\cot\alpha} = \frac{y}{2}$$

$$9 - y^2 = 3y^2 \qquad y = \frac{3}{2} \qquad \cot\alpha = 2$$

نوشتن اردیبهشت



④

$$\tan\alpha = -\tan\beta = -\frac{\sqrt{7}}{2}$$

③

$$2\sin^2 + \cos^2 = \frac{\varepsilon}{4} + \cos^2$$

$$2\sin^2 + 2\cos^2 - \cos^2 = \frac{\varepsilon}{4}$$

$$\cos^2 = \frac{2}{3} \qquad \sin^2 = \frac{1}{3}$$

④

$$\frac{\sin^4 + 4\cos^2 + 3}{1 + \cos^2} - \frac{\cos^3 + 3\sin^4 - 3}{1 + \sin^2}$$

$$2 - \sin^2\alpha - 2 + \cos^{2k}\alpha = \cos^2\alpha$$

⑦

$\tan\alpha = \frac{4}{3}$ $\quad \pi < \alpha < \frac{3\pi}{2}$

نوشتن اتحاد

$1 + \tan^2 = \frac{1}{\cos^2}$

$\frac{25}{2}$

$-\frac{3}{5} \Rightarrow \sin = -\frac{4}{5}$

$\sin\left(\frac{9\pi}{2}+\alpha\right)\cos\left(\frac{7\pi}{2}-\alpha\right) - \tan\left(\alpha - \frac{3\pi}{2}\right)$

$-\cos\alpha \times \sin\alpha + \cot\alpha = -\frac{48}{100} + \frac{75}{100}$

$0,27$

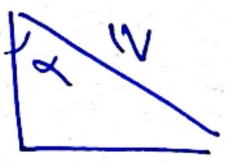
⑧

$3\cos 2x + \sqrt{7}\sin x - \sqrt{7}\sin x \rightarrow 0,5$

$\sqrt{2}\sin\left(\frac{\pi}{2} - \frac{\pi}{4}\right) = \sqrt{2}\sin\frac{\pi}{12}$ $\quad \sin\frac{\pi}{9} + 8\cos\frac{\pi}{9}$

⑨

$\tan\left(\frac{\alpha}{2}\right) = \frac{1}{4}$ $\quad \frac{\tan\alpha - \sin\alpha}{\sin\alpha - \cos\alpha}$



$\alpha = \tan\left(\frac{\alpha}{2} + \frac{\alpha}{2}\right) = \frac{8}{15}$

اعداد طلایی $8, 10, 9, 4$

$\frac{\frac{8}{15} - \frac{8}{11}}{\frac{8}{11} - \frac{15}{17}} = \frac{14}{-105}$

$2\sin\alpha < 2\sin\alpha\cos\alpha$

$\sin\alpha < 0$

$\cos < 1$ ✓

$\sin < 0$ ✗

$\sin\alpha > 0$

$\cos < 1$ ✗

$\frac{\cos\alpha}{\sin^2\alpha} > 0$ $\quad \cos\alpha > 0 \longrightarrow$ ناصیح

⑦

نوشتن اردیبهشت - یازدهم سری B