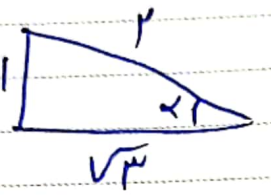
«زهرا لاری» «دبیرستان دهم دختران»

۱- $S_{\square} = \sin 120 \cdot a^2 \cdot a^2 = 36$

$a = 3\sqrt{2}$ $P_{\square} = 10a = \boxed{30\sqrt{2}}$

۲- $\frac{1}{2} \cdot 8 \cdot 5 \cdot \sin A - \frac{1}{6} \cdot 6 \cdot 5 \cdot \sin A = 17.5$

$\sin A = \frac{1}{6}$



$\tan A = \boxed{\frac{\sqrt{35}}{35}}$

۳- $\frac{|\sin\alpha|}{\cos\alpha} = \frac{-\sin\alpha}{\cos\alpha} \rightarrow \sin\alpha < 0$

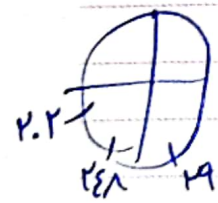
$\frac{1}{|\cos\alpha|} - \frac{1+\sin\alpha}{|\cos\alpha|} = \frac{\sin\alpha}{\cos\alpha} \rightarrow \frac{\sin\alpha}{-\cos\alpha} = \frac{\sin\alpha}{\cos\alpha}$

$\rightarrow \cos\alpha < 0 \rightarrow$ (پوچ)

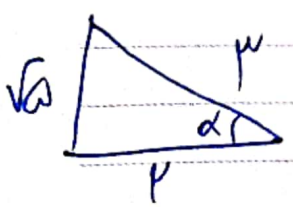
۴- $m = \frac{1.5}{3} = \frac{3}{4} \rightarrow \tan\alpha = -\frac{3}{4}$

$\tan\left(\frac{\pi}{2} - \alpha\right) = \cot\alpha = \boxed{-\frac{4}{3}}$

۵- $\cos 945 = \cos 225 = \frac{3\pi - 2\pi}{-\pi - \pi} = \boxed{\frac{5}{2}}$

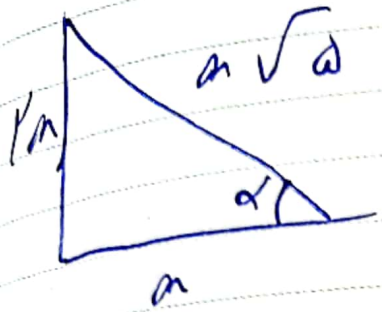


۶-



$\frac{\cos\alpha + \sin\alpha}{|1 + \tan^2\alpha - 1|} = \frac{\frac{2}{3} - \frac{\sqrt{5}}{3}}{\frac{1}{4}} = \boxed{\frac{1 - 4\sqrt{5}}{3}}$

$\tan^2\alpha = \left(\frac{\sqrt{5}}{2}\right)^2$



$\cos\alpha = \frac{-m}{m\sqrt{5}} = -\frac{\sqrt{5}}{5}$ ـ ۷

$\tan 4\alpha = \sqrt{3} \quad \frac{-2m}{m^2-1} = \sqrt{3}$ ـ ۸

$\sqrt{3}m^2 - \sqrt{3} + 2m = 0 \rightarrow \frac{\sqrt{5}}{|m|} = \frac{\sqrt{\varepsilon+12}}{\sqrt{3}} = \frac{\varepsilon}{\sqrt{3}} = \frac{\varepsilon\sqrt{3}}{3}$

$0 < \frac{\pi}{\varepsilon} - x < \frac{\pi}{2} \rightarrow \tan\left(\frac{\pi}{\varepsilon} - x\right) > 0$ ـ ۹

$\frac{1-m}{2+m} > 0 \rightarrow \frac{-2}{-\sqrt{5}+5} \rightarrow -2 < m < 1$

$-\sqrt{3}\alpha - \frac{\sqrt{3}}{3} + -\sqrt{3}\alpha\frac{\sqrt{3}}{2} = 0$ ـ ۱۰