نام و نام خانوادگی ....[illegible]........ پاسخنامه تشریحی تکلیف شماره .... کلاس ....

۱

$\tan(2(0)+\frac{\pi}{4}) = 1 \to B(0,1)$

$T = \frac{\pi}{2} \to A \; C \qquad S_{ABC} = \frac{1}{2} \times 1 \times \frac{\pi}{2} = \frac{\pi}{4}$

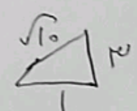
۲

$\frac{4}{9} - \frac{2}{3}\sin\alpha - \frac{1}{4}\cos^2\alpha = 0 \to \frac{4}{9} - \frac{2}{3}\sin\alpha - \frac{1}{4} + \frac{1}{4}\sin^2\alpha \qquad 1+(\frac{\sqrt{?}}{\sqrt{8}})^2 = \frac{9}{8}$

$16 - 24\sin\alpha - 9 + 9\sin^2\alpha = 0 \to 9\sin^2 - 24\sin\alpha + 7 = 0 \; \begin{cases} \frac{3}{9} = \frac{1}{3} = \sin\alpha \\ \frac{21}{9} \text{ غق} \end{cases}$

۳

$\log^{\frac{\sin\alpha}{-\cos\alpha}} = \log^{3} \to \tan\alpha = -3$



$\cos\alpha < 0$

$\sin\alpha > 0$

$\frac{3}{\sqrt{10}} + \frac{1}{\sqrt{10}} = \frac{4\sqrt{10}}{10}$

۴

$5\sin^4\alpha - 5\sin^2\alpha + 1 = 0 \quad \frac{5 \pm \sqrt{25-20}}{10} \to \sin^2\alpha = \frac{5-\sqrt{5}}{10}$ (غق)

$5t^2 - 5t + 1 = 0$

۵

$\frac{\sin(3\pi + \ldots)}{2-2\cos^2} < 0 \Rightarrow \sin\alpha < 0$ (همواره مثبت)

ناحیه سوم

$\frac{\sin -1}{\cos} > 0 \Rightarrow \cos\alpha < 0$ (همواره منفی)

۶

$$\frac{2\cos + 3\sin}{\sin\cos} = 0 \rightarrow 2\cos + 3\sin = 0 \rightarrow \tan = \frac{-2}{3}$$

$$\frac{-2}{c} - \frac{3}{2} = \frac{-13}{6}$$

۷

$$\frac{\sqrt{1+\cos 40}}{2\sin\left(\frac{30+10}{2}\right)\cos\left(\frac{30-10}{2}\right)} = \frac{\sqrt{2}\cos 20}{2\sin 20\cos 20} = \sqrt{2}$$

۸

$$1 - 2\sin^2 a = \cos 10$$

$$2\cos^2 17 - 1 = \cos 34$$

$$\frac{1-\tan^2 20}{1+\tan^2 20} = \cos 40$$

$$\frac{\sin 10}{\sin 10} \times \cos 10 \times \cos 20 \times \cos 40 = \frac{1}{8}\tan 10$$

۹

$$* \sin^2 = (2 - 3\cos)^2 \rightarrow 1 - \cos^2 = 4 - 12\cos + 9\cos^2$$

$$10\cos^2 - 12\cos + 3 = 0$$

$$* a(2\cos^2 - 1) - 12\cos = \underbrace{(10\cos^2 - 12\cos)}_{0} - a = -a$$

۱۰

$$\sin B\sin C = \frac{1}{2}\left(\cos(B-C) - \underbrace{\cos(B+C)}_{-\cos A}\right)$$

$$72 + 72 + A = 180$$

$$A = 36^\circ$$

$$\frac{1}{2}\left(\cos(B-C) + \cos A\right) = \frac{1+\cos A}{2} \rightarrow \cos(B-C) = 1 \rightarrow B - C = 0$$

$$B = C$$

$$C = 72^\circ$$