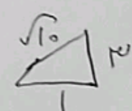
۱۸,۵

نام و نام خانوادگی .... پاسخنامه تشریحی تکلیف شماره .... کلاس ....

$\tan(2(0)+\frac{\pi}{4}) = 1 \to B(0,1)$ $T=\frac{\pi}{2} \to A\,\Gamma C$ $\quad S_{ABC}=\frac{1}{2}\times 1\times\frac{\pi}{2}=\frac{\pi}{4}$ ۲	۱
$\frac{4}{9}-\frac{2}{3}\sin\alpha-\frac{1}{4}\cos^2\alpha=0 \to \frac{4}{9}-\frac{2}{3}\sin\alpha-\frac{1}{4}+\frac{1}{4}\sin^2\alpha$ $\quad 1+(\frac{\sqrt{7}}{\sqrt{2}})^2=\frac{9}{2}$  $16-24\sin\alpha-9+9\sin^2\alpha=0 \to 9\sin^2-24\sin\alpha+7=0$ $\begin{cases}\frac{3}{9}=\frac{1}{3}=\sin\alpha\\ \frac{21}{9}\ \text{غ ق ق}\end{cases}$ ۲	۲
$\log_{-\cos\alpha}\sin\alpha=\log ... \to \tan\alpha=-3$  $\cos\alpha<0$, $\sin\alpha>0$ $\frac{3}{\sqrt{10}}+\frac{1}{\sqrt{10}}=\frac{4\sqrt{10}}{10}$ ۲	۳
$5\sin^4\alpha-5\sin^2\alpha+\frac{1}{1}=0$ $\quad t=\frac{5\pm\sqrt{25-20}}{10} \to \sin^2\alpha=\frac{5-\sqrt{5}}{10}$ $5t^2-5t+1=0$ $\sin^4\theta+\cos^2\theta=\frac{4}{5} \to (1-\cos^2\theta)^2+\cos^2\theta=\frac{4}{5} \to \cos^4\theta-\cos^2\theta+1=\frac{4}{5}$ $\cos^4\theta-1+\sin^2\theta+1=\frac{4}{5} \to \cos^4\theta+\sin^2\theta=\frac{4}{5}$ ۱	۴
$\frac{\sin(3+\cos)}{2-2\cos^2}<0 \Rightarrow \sin\alpha<0$ (همواره مثبت) (همواره مثبت) $\frac{\sin-1}{\cos}\geq 0 \Rightarrow \cos\alpha<0$ ($\frac{-\cos^2\alpha}{2}$ همواره منفی) ناحیه سوم ۲	۵

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

$$\frac{\sqrt{1+\cos 4\alpha}}{2\sin\left(\frac{\alpha+\pi}{2}\right)\cos\left(\frac{\alpha-\pi}{2}\right)} = \frac{\sqrt{2}\cos 2\alpha}{2\sin\frac{\pi}{2}\cos 2\alpha} = \sqrt{2}$$ ✓

۸

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

$2\cos^2 17\frac{1}{2} = \cos 2\alpha$

$\frac{1-\tan^2 2\alpha}{1+\tan^2 2\alpha} = \cos 4\alpha$

$\frac{\sin\alpha}{\sin\alpha} \times \cos\alpha \times \cos 2\alpha \times \cos 4\alpha = \frac{1}{8}\tan\alpha$

$\frac{1}{8} \times \frac{\sin 80}{\sin 10} = \frac{\frac{1}{8}\cos 10}{\sin 10} = \frac{1}{8}\cot 10$

۱٫۷۵

۹

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

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

$2(2\cos^2 - 1) - 12\cos = (10\cos^2 - 12\cos) - 2 = -2$

$10\left(\frac{1+\cos 4\alpha}{2}\right) - 12\cos 2\alpha + 3 = 5\cos 4\alpha - 12\cos 2\alpha = -8$

۱٫۷۵

۱۰

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

$72 + 72 + A = 180$

$A = 36^\circ$ ✓

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

$B = C$

$C = 72^\circ$ ✓