نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ..۲۸.. کلاس ..یازدهم ریاضی ۸..

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$$\frac{1}{|\cos\alpha|}-\frac{\sin\alpha}{\cos\alpha}=\frac{1-\sin\alpha}{|\cos\alpha|}\Rightarrow \cos\alpha=(+)$$

$$\cot\alpha=\frac{\cos\alpha}{|\sin\alpha|}\Rightarrow \cot\alpha=(+)$$

$\Rightarrow$ ناحیه اول

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$$-\frac{\pi}{6}<\alpha<\frac{5\pi}{6}\Rightarrow -\frac{1}{2}<\sin\alpha\leq 1 \Rightarrow -\frac{1}{2}<\frac{m-1}{4}\leq 1 \Rightarrow -2<m-1\leq 4$$

$$\Rightarrow -1<m\leq 5$$

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$$\frac{\sin x}{\cos x}+\frac{\cos x}{\sin x}=\frac{1}{\sin x\cos x}=-3\Rightarrow \sin x\cos x=-\frac{1}{3}$$

$$(\sin x+\cos x)^2=1+2\sin x\cos x\Rightarrow \sin x+\cos x=\sqrt{\frac{1}{3}}=\frac{1}{\sqrt{3}}$$ ناحیه دوم $\Rightarrow \sin x+\cos x=-\frac{1}{\sqrt{3}}$

$$\frac{1}{(\sin x+\cos x)(\sin^2 x+\cos^2 x-\sin x\cos x)}=\frac{1}{-\frac{1}{\sqrt{3}}(1+\frac{1}{3})}=\frac{1}{-\frac{4}{3\sqrt{3}}}=-\frac{3\sqrt{3}}{4}=-\frac{\sqrt{5}}{1-}\sqrt{3}$$

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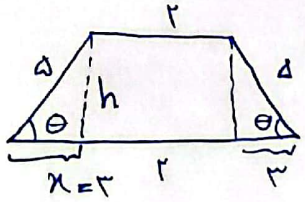

$$\cos\theta=0.6\rightarrow \frac{x}{5}=\frac{6}{10}\Rightarrow x=3$$

نیاعنبت $\rightarrow h=4$

$$S=\frac{(2+8)4}{2}=20$$

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$$-\tan\left(\frac{3\pi}{2}+15\right)\tan(\pi-15)-\sin(4\pi+15)\cos\left(\frac{3\pi}{2}-15\right)=(+\cot 15)(-\tan 15)$$

$$+\sin 15\sin 15=-1+\sin^2 15=-(\cos^2\tfrac{\pi}{15}+\sin^2\tfrac{\pi}{15})-\sin^2 15=-\cos^2 15$$

$$\Rightarrow k=-1$$

۶

$$A=\sqrt{2}\left(-\frac{\sqrt{2}}{2}\right)\sin\left(\frac{3\pi}{2}-2\theta\right)-\sqrt{2}\left(\frac{\sqrt{2}}{2}\right)\cos(\pi-2\theta)=\frac{2}{2}\cos 2\theta+\cos 2\theta$$

$$=\cos 2\theta\left(\frac{2}{2}+1\right)=\frac{\frac{5}{2}\cos 2\theta}{\cos 2\theta}=\boxed{\frac{5}{2}}$$

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$$f\left(\frac{\pi}{24}\right)=16\cos^2\left(\frac{\pi}{12}\right)\cos^2\left(\frac{\pi}{6}\right)\cos^2\left(\frac{\pi}{4}\right)\cos^2\left(\frac{\pi}{3}\right)\cos^2\left(\frac{5\pi}{12}\right)=16\left(\frac{1+\cos\left(\frac{\pi}{6}\right)}{2}\right)\cos^2\left(\frac{\pi}{6}\right)\cos^2\left(\frac{\pi}{4}\right)\cos^2\left(\frac{\pi}{3}\right)$$

$$=16\left(\frac{2+\sqrt{3}}{4}\right)\left(\frac{3}{4}\right)\left(\frac{2}{4}\right)\left(\frac{1}{2}\right)^2\left(\frac{1}{2}\right)^2=\frac{16}{16}\times\frac{3}{4}\left(2+\sqrt{3}\right)=\boxed{\frac{6+3\sqrt{3}}{4}}$$

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$$\sin^2 x+\cos^2 x=1\Rightarrow \sin^2 x=1-\cos^2 x\Rightarrow 25\sin^2 x=9\Rightarrow \sin x=\frac{-3}{5},\ \cos x=-\frac{4}{5}$$

$$\tan\frac{x}{2}=\sqrt{\frac{2\sin^2\frac{x}{2}}{2\cos^2\frac{x}{2}}}=\sqrt{\frac{1-\cos x}{1+\cos x}}=\sqrt{\frac{\frac{9}{5}}{\frac{1}{5}}}=\boxed{3}$$

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$$\frac{2\sin\frac{\theta}{2}\cos\frac{\theta}{2}}{2\sin^2\frac{\theta}{2}}=\frac{\cos\frac{\theta}{2}}{\sin\frac{\theta}{2}}=\cot\frac{\theta}{2}$$

$$\xrightarrow{\oplus} 2\cot\frac{\theta}{2}=2\Rightarrow k=2$$

$$\frac{2\cos^2\frac{\theta}{2}}{2\sin\frac{\theta}{2}\cos\frac{\theta}{2}}=\frac{\cos\frac{\theta}{2}}{\sin\frac{\theta}{2}}=\cot\frac{\theta}{2}$$

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$$\cos\left(\frac{11\pi}{4}+\alpha\right)=\cos\left(\frac{3\pi}{4}+\alpha\right)=\left(\cos\frac{3\pi}{4}\cos\alpha\right)-\left(\sin\frac{3\pi}{4}\sin\alpha\right)$$

$$\sin\alpha=\frac{\sqrt{2}}{10}$$

$$\cos\alpha=\frac{\sqrt{98}}{10}$$

$$\left(\frac{-\sqrt{2}}{2}\times\frac{\sqrt{98}}{10}\right)-\left(\frac{\sqrt{2}}{2}\times\frac{\sqrt{2}}{10}\right)$$

$$=\frac{-\sqrt{196}}{20}-\frac{2}{20}=\frac{-14}{20}-\frac{2}{20}=\frac{-18}{20}=\boxed{\frac{-9}{10}}$$