نام و نام خانوادگی: علی ربانی پاسخنامه تکلیف شماره: ۲۶ کلاس یازدهم: A

۲۰

۱-

$S = ab\sin\alpha = \frac{1}{2}\times 2\sqrt{2}\times\sqrt{2} = \sqrt{2}z^2$ (۲)

$\sqrt{2}z^2 \longrightarrow dS$

$2z \longrightarrow h \Rightarrow z = -\sqrt{11}$

$P = 2\times 5z = 10z = \boxed{10\sqrt{11}}$ ✓

۲- (۲)

$S_{ABC} = S_{ADE} + 1,V5$

$\frac{1}{2}\times V_2\,5\times\sin A = \frac{1}{2}\times V_2\times 4\times\sin A + 1,V5$

$\frac{V}{2}\sin A(5-4) = 1,V5$

$V\sin A = 8,5 \Rightarrow \sin A = 0,5 \Rightarrow A = 30$

$\tan 30 = \frac{1}{\sqrt{3}} = \boxed{\frac{\sqrt{3}}{3}}$ ✓

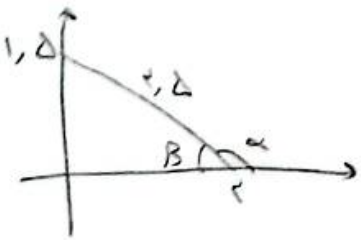
۳- ناحیه ۳ ✓ (۲)

$\frac{|\sin\alpha|}{\cos\alpha} = -\frac{1}{\cot\alpha} = -\frac{\sin\alpha}{\cos\alpha} \longrightarrow |\sin\alpha| = -\sin\alpha \Rightarrow \boxed{\sin\alpha < 0}$

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

$\Rightarrow \boxed{\cos\alpha < 0}$

۴- (۲)



$\sin\beta = \frac{1,5}{2,5} = \frac{3}{5}$

$\cos\beta = \frac{2}{2,5} = \frac{4}{5}$

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

$\beta + \alpha = 180 \Rightarrow \sin\alpha = \sin\beta\ ,\ \cos\alpha = -\cos\beta$

۵- (۲)

$\frac{2\cos(248) - 2\sin(158)}{\sin(24) - \cos(492)} = \frac{2\cos(\frac{\pi}{2}\times 180 + 68) - 2\sin(\frac{\pi}{2}\times 90 + 68)}{\sin(\pi\times 180 + 22) - \cos(\frac{5\pi}{2}\times 180 + 22)} = \frac{-2\cos(68) - 2\cos(68)}{-2\sin(22)}$

$22 + 68 = 90 \Rightarrow \sin 22 = \cos 68 \Rightarrow \frac{-4\cos(68)}{-2\cos(68)} = \boxed{\frac{4}{2}}$ ✓

۶- (۲)

$$\frac{\sin\left(\frac{\pi}{2}+\alpha\right)-\sin(\alpha-\pi)}{|\tan^2\alpha-1|}=\frac{\cos\alpha+\sin\alpha}{\left|\frac{5}{4}-1\right|}=\frac{\frac{2}{3}-\frac{\sqrt{5}}{3}}{\frac{1}{4}}=\frac{4\left(2-\sqrt{5}\right)}{3}$$ ✓

$\sin^2+\cos^2=1 \Rightarrow \frac{4}{9}+\sin^2=1 \Rightarrow \sin^2=\frac{5}{9} \Rightarrow \sin=\frac{\sqrt{5}}{3} \xrightarrow{\text{ربع ۴}} -\frac{\sqrt{5}}{3}$

$\tan^2\alpha=\frac{\frac{5}{9}}{\frac{4}{9}}=\frac{5}{4}$

۷- (۲)

$\sin^2\alpha+\cos^2\alpha=1$

$4\cos^2\alpha+\cos^2\alpha=1 \Rightarrow 5\cos^2\alpha=1 \Rightarrow \cos^2\alpha=\frac{1}{5} \Rightarrow \cos\alpha=-\frac{1}{\sqrt{5}}$ (ربع ۲) ✓

۸- (۲)

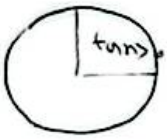
$2mx+(m^2-1)y=2$

$\tan\alpha=$ شیب $\Rightarrow \tan 45^\circ=\frac{-2m}{m^2-1} \Rightarrow \frac{-2m}{m^2-1}=\sqrt{2} \Rightarrow \sqrt{2}m^2-\sqrt{2}=-2m$

$\sqrt{2}m^2+2m-\sqrt{2}=0 \Longrightarrow \frac{\sqrt{\Delta}}{|a|}=\frac{\sqrt{4+8}}{\sqrt{2}}=\frac{3}{\sqrt{2}}$ ✓

۹- (۲)

$-\frac{\pi}{12}<\alpha<\frac{\pi}{4} \qquad \frac{\pi}{12}>-\alpha>-\frac{\pi}{3} \qquad \frac{\pi}{3}>\frac{\pi}{4}-\alpha>0$



$\Rightarrow \frac{1-m}{2+m}>0$

	-2		1	
$1-m$	$+$	$+$	0	$-$
$2+m$	$-$	0	$+$	$+$
	$-$	0	$+$	$-$

$\rightarrow m=(-2,1)$ ✓

۱۰- (۲)

$\tan(200^\circ)\cos(210^\circ)+\tan(480^\circ)\sin(840^\circ)$

$200^\circ=180^\circ+20^\circ$, $480^\circ=360^\circ+120^\circ$, $840^\circ=720^\circ+120^\circ$

$-\sqrt{2}\times-\frac{\sqrt{2}}{2}+-\sqrt{2}\times\frac{\sqrt{2}}{2}=2-2=0$ ✓