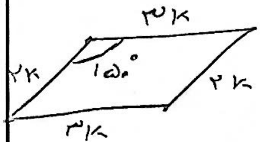
نام و نام خانوادگی ...آرشام بابایی..... پاسخنامه تشریحی تکلیف شماره ..۲۶.. کلاس ...یازدهم...

۱



$\longrightarrow S = ab\sin\alpha \Longrightarrow S = 3k \times 2k \times \sin 150^\circ = 3k^2 = 54$

$\longrightarrow k = 3\sqrt{2}$

$\boxed{P = 10k = 10 \times 3\sqrt{2} = 30\sqrt{2}}$

۲

$S_{A\overset{\triangle}{B}C} = \frac{1}{2} \times 5 \times 7 \times \sin\hat{A} = 17{,}5 \sin\hat{A}$

$S_{A\overset{\triangle}{D}E} = \frac{1}{2} \times 4 \times 7 \times \sin\hat{A} = 14 \sin\hat{A}$

$\Big\}\ S_{ABC} - S_{ADE} = 3{,}5 \sin\hat{A} = 1{,}75 \Longrightarrow \sin\hat{A} = \frac{1}{2}$

$\xrightarrow{\hat{A} < 90^\circ} A = 30^\circ$

$\Rightarrow \tan\hat{A} = \tan 30^\circ = \boxed{\frac{\sqrt{3}}{3}}$

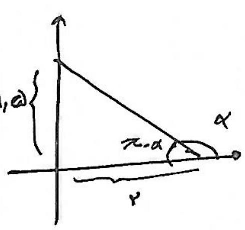
۳

$\frac{1}{\sqrt{\cos^2\alpha}} - tg\alpha = \frac{1+\sin}{|\cos\alpha|} \Rightarrow tg = \frac{-\sin}{|\cos\alpha|} \Rightarrow \frac{\sin}{\cos} = \frac{-\sin}{|\cos|}$

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

$\Rightarrow \frac{|\sin\alpha|}{\cos\alpha} = \frac{-\sin\alpha}{\cos\alpha} \Rightarrow |\sin\alpha| = -\sin\alpha \Rightarrow \boxed{\sin\alpha < 0} \Longrightarrow$ α ناحیه سوم است

۴



$\Longrightarrow tg(\pi - \alpha) = -tg\alpha = \frac{1{,}5}{2} \longrightarrow tg\alpha = \frac{-1{,}5}{2}$

$tg\left(\frac{\pi}{2} - \alpha\right) = \cot\alpha = \frac{1}{tg\alpha} = \frac{2}{-1{,}5} = \boxed{-\frac{4}{3}}$

۵

$\cos(248^\circ) = \cos\left(\frac{3\pi}{2} - 22\right) = -\sin 22$

$\sin(158^\circ) = \sin(\pi - 22) = +\sin 22$

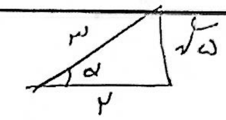
$\sin(202^\circ) = \sin(\pi + 22) = -\sin 22$

$\cos(292^\circ) = \cos\left(\frac{3\pi}{2} + 22\right) = +\sin 22$

$\Longrightarrow \frac{-3(\sin 22^\circ) - 2(\sin 22^\circ)}{-\sin 22^\circ - \sin 22^\circ} = \frac{-5\sin 22^\circ}{-2\sin 22^\circ}$

$= \frac{-5}{-2} = \boxed{2{,}5}$

$\sin(\frac{\pi}{۲}+\alpha) = +\cos\alpha \quad \} \quad \sin(\alpha-\pi) = -\sin\alpha \quad \}$

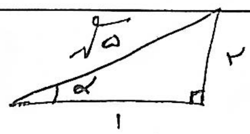


$\Rightarrow tg = \frac{-\sqrt{۵}}{۲}$

$\sin = \frac{-\sqrt{۵}}{۳}$

$$\frac{\sin(\frac{\pi}{۲}+\alpha)-\sin(\alpha-\pi)}{|tg^۲\alpha-۱|} = \frac{\cos\alpha+\sin\alpha}{|tg^۲\alpha-۱|} = \frac{\frac{۲}{۳}-\frac{\sqrt{۵}}{۳}}{|\frac{۵}{۴}-۱|} = \frac{\frac{۲-\sqrt{۵}}{۳}}{\frac{۱}{۴}} = \frac{۸-۴\sqrt{۵}}{۳}$$ ۶

$\sin\alpha = ۲\cos\alpha \longrightarrow \frac{\sin}{\cos} = tg = ۲$



$$\longrightarrow |\cos\alpha| = \frac{۱}{\sqrt{۵}} \xrightarrow[\text{منفی}]{\text{ربع سوم}} \cos\alpha = \frac{-۱}{\sqrt{۵}} = \frac{-\sqrt{۵}}{۵}$$ ۷

$(m^۲-۱)y = -۲mx+۳ \longrightarrow y = \frac{-۲m}{m^۲-۱}x+۳ \longrightarrow$ شیب $= \frac{-۲m}{m^۲-۱}$

زاویه ۶۰° درجه $\longrightarrow$ شیب خط $= tg\,۶۰° = \sqrt{۳} \Longrightarrow \frac{-۲m}{m^۲-۱} = \sqrt{۳} \Rightarrow \sqrt{۳}m^۲+۲m-\sqrt{۳} = ۰$ ۸

$$\longrightarrow m = \frac{-۲\pm\sqrt{۱۶}}{۲\sqrt{۳}} = \frac{-۲\pm۴}{۲\sqrt{۳}} \begin{cases} \frac{-۶}{۲\sqrt{۳}} = \frac{-۳}{\sqrt{۳}} \\ \frac{۲}{۲\sqrt{۳}} = \frac{۱}{\sqrt{۳}} \end{cases} \Big\} \ \frac{۱}{\sqrt{۳}}+\frac{۳}{\sqrt{۳}} = \frac{۴}{\sqrt{۳}} = \frac{۴\sqrt{۳}}{۳}$$

$$\frac{-\pi}{۴} < x < \frac{\pi}{۴} \xrightarrow{\times(-۱)} \frac{\pi}{۴} > -x > \frac{-\pi}{۴} \xrightarrow{+\frac{\pi}{۴}} \frac{\pi}{۲} > \frac{\pi}{۴}-x > ۰$$

$$\longrightarrow +\infty > tg(\frac{\pi}{۴}-x) > ۰ \longrightarrow \frac{۱-m}{۲+m} > ۰$$ ۹

	-۲		۱	
$-$	$\emptyset$	$+$	$\emptyset$	$-$

$\longrightarrow m = (-۲, ۱)$

$$tg(۳۰۰°)\cos(۲۱۰°)+tg(۴۸۰)\sin(۸۴۰) = tg(\frac{۵\pi}{۳})\cos(\frac{۷\pi}{۶})+tg(\frac{۲\pi}{۳})\sin(\frac{۲\pi}{۳})$$

$$= -\sqrt{۳}\times\frac{-\sqrt{۳}}{۲} + -\sqrt{۳}\times\frac{\sqrt{۳}}{۲} = \frac{۳}{۲}-\frac{۳}{۲} = ۰$$ ۱۰