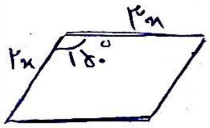
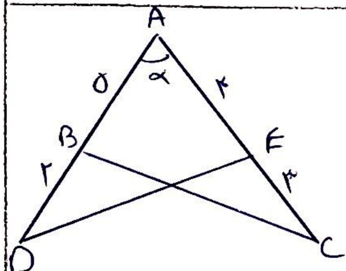
نام و نام خانوادگی ......علی صفری...... پاسخنامه تشریحی تکلیف شماره ..۲۶.. کلاس ...یازدهم تجربی A...



$\longrightarrow S = ab\underset{\frac{1}{2}}{\underline{\sin\alpha}} = 2x \times 3x \times \frac{1}{2} = 54 \rightarrow 3x^2 = 54 \rightarrow x^2 = 18$

$\longrightarrow x = +\sqrt{18}$ ۱

$\longrightarrow P = 2(2x + 3x) = 10x = 10\sqrt{18} = 30\sqrt{2}$



$S_{ABC} - S_{ADE} = 1{,}75 \rightarrow \left(\frac{1}{2} AC \times AB \sin\alpha\right) - \left(\frac{1}{2} AD \times AE \sin\alpha\right)$

$= 1{,}75 \longrightarrow \left(\frac{1}{2} \times 7 \times 5 \times \sin\alpha\right) - \left(\frac{1}{2} \times 7 \times 4 \times \sin\alpha\right) = 1{,}75$ ۲

$\longrightarrow \sin\alpha\left(\frac{35}{2} - \frac{28}{2}\right) = 1{,}75 \longrightarrow \frac{7}{2}\sin\alpha = 1{,}75$

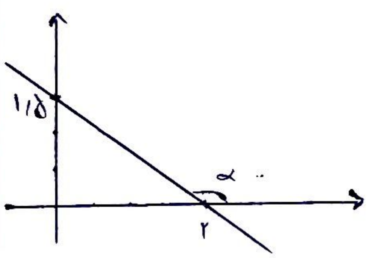
$\longrightarrow \sin\alpha = \frac{1}{2} \xrightarrow{\text{حاده است}} \alpha = 30^\circ \longrightarrow \tan\alpha = \frac{\sqrt{3}}{3}$

$\frac{|\sin\alpha|}{\cos\alpha} = \frac{-1}{\cot\alpha} = -\tan\alpha = \frac{-\sin\alpha}{\cos\alpha} \rightarrow |\sin\alpha| = -\sin\alpha \rightarrow \sin\alpha < 0$

۳

$\frac{1}{|\cos\alpha|} - \frac{\sin\alpha}{\cos\alpha} = \frac{1+\sin\alpha}{|\cos\alpha|} \longrightarrow \frac{-\sin\alpha}{\cos\alpha} = \frac{\sin\alpha}{|\cos\alpha|} \rightarrow |\cos\alpha| = -\cos\alpha \rightarrow \cos\alpha < 0$

← ربع سوم

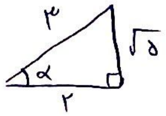


$\tan(\pi - \alpha) = -\tan\alpha = \frac{1{,}5}{2} \longrightarrow \tan\alpha = -\frac{3}{4}$

$\tan\left(\frac{\pi}{2} - \alpha\right) = \cot\alpha = \frac{1}{\tan\alpha} = -\frac{4}{3}$ ۴

$\frac{3\cos(248^\circ) - 2\sin(158^\circ)}{\sin(202^\circ) - \cos(292^\circ)} = \frac{3\cos\left(\frac{3\pi}{2} - 22^\circ\right) - 2\sin(\pi - 22^\circ)}{\sin(\pi + 22^\circ) - \cos\left(\frac{3\pi}{2} + 22^\circ\right)} = \frac{-3\sin 22^\circ - 2\sin 22^\circ}{-\sin 22^\circ - \sin 22^\circ}$ ۵

$= \frac{-5\sin 22^\circ}{-2\sin 22^\circ} = \frac{5}{2} = 2{,}5$

$$\cos\alpha = \frac{2}{3} \longrightarrow$$ 

$$\xrightarrow{\alpha \text{ در ناحیه چهارم}} \sin\alpha = \frac{-\sqrt{5}}{3} \qquad \tan\alpha = \frac{-\sqrt{5}}{2}$$

$$\rightarrow \frac{\sin\left(\frac{\pi}{2}+\alpha\right)-\sin(\alpha-\pi)}{|\tan^2\alpha - 1|} = \frac{\cos\alpha + \sin\alpha}{|\tan^2\alpha - 1|} = \frac{\frac{2-\sqrt{5}}{3}}{\left|\frac{5}{4}-1\right|} = \frac{\frac{2-\sqrt{5}}{3}}{\frac{1}{4}}$$ ۶

$$= \frac{4(2-\sqrt{5})}{3}$$

$$\sin\alpha = 2\cos\alpha \longrightarrow \frac{\sin\alpha}{\cos\alpha} = 2 \longrightarrow \tan\alpha = 2 \longrightarrow 1+\tan^2\alpha = \frac{1}{\cos^2\alpha}$$

$$\rightarrow 1+4 = \frac{1}{\cos^2\alpha} \rightarrow \cos^2\alpha = \frac{1}{5} \xrightarrow{\alpha \text{ در ربع سوم}} \cos\alpha = \frac{-\sqrt{5}}{5}$$ ۷

$$2mx + (m^2-1)y = 4 \longrightarrow \frac{-2m}{m^2-1} = \tan 60^\circ \longrightarrow \frac{-2m}{m^2-1} = \sqrt{3}$$

$$\rightarrow \sqrt{3}m^2 + 2m - \sqrt{3} = 0 \longrightarrow \Delta m = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{4+12}}{\sqrt{3}} = \frac{4}{\sqrt{3}}$$ ۸

$$-\frac{\pi}{4} < x < \frac{\pi}{4} \rightarrow 0 < \frac{\pi}{4} - x < \frac{\pi}{2} \longrightarrow 0 < \tan\left(\frac{\pi}{4}-x\right) \rightarrow 0 < \frac{1-m}{2+m}$$

$\rightarrow$

	-2		1	
$-$	∄	$+$	0	$-$

$\rightarrow m = (-2, 1)$ ۹

$$\tan(300^\circ)\cos(210^\circ) + \tan(480^\circ)\sin(840^\circ) = \tan\left(\frac{3\pi}{2}+30^\circ\right)\cos(\pi+30^\circ)$$

$$+ \tan\left(\frac{5\pi}{2}+30^\circ\right)\sin\left(\frac{9\pi}{2}+30^\circ\right) = (-\cot 30^\circ)(-\cos 30^\circ) + (-\cot 30^\circ)(\cos 30^\circ)$$ ۱۰

$$= (-\sqrt{3})\left(-\frac{\sqrt{3}}{2}\right) + (-\sqrt{3})\left(\frac{\sqrt{3}}{2}\right) = \frac{3}{2} - \frac{3}{2} = 0$$