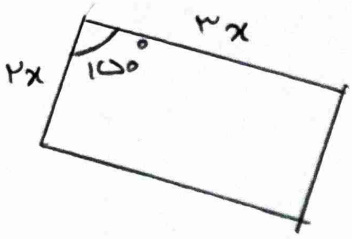
نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۲۶ کلاس یازدهم ریاضی A

19,5

۱ (۲)



$S_{\text{مستطیل}} = 2x \cdot 3x \cdot \sin 135^\circ = \frac{9x^2}{2} = 9$

$\rightarrow x = 3\sqrt{2}$

$P = 2(2x + 3x) = 10x = 30\sqrt{2}$ ✓

۲ (۱,۵)

$S_{ABC} - S_{ADE} = 1,75 \rightarrow 7 \times 5 \times \sin\hat{A} - 7 \times 4 \times \sin\hat{A} = 1,75$

$\rightarrow \frac{7}{2}\sin\hat{A} = 1,75 \rightarrow \sin\hat{A} = \frac{1}{2} \rightarrow \cos\hat{A} = \frac{\sqrt{15}}{4} \rightarrow \tan\hat{A} = \frac{\sqrt{15}}{15}$

$S_\Delta = \frac{1}{2}ab\sin\hat{C}$

$\frac{1}{2} \hookrightarrow A = 30^\circ \rightarrow \tan\hat{A} = \frac{\sqrt{3}}{3}$

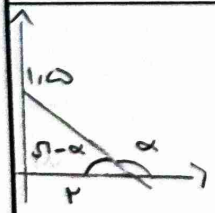
۳ (۲)

$\frac{|\sin\alpha|}{\cos\alpha} = -\frac{1}{\cot\alpha} = -\frac{\sin\alpha}{\cos\alpha} \rightarrow \sin\alpha$ ⊖

$\frac{1}{\sqrt{\cos^2\alpha}} - \tan\alpha = \frac{1+\sin\alpha}{|\cos\alpha|} \rightarrow -\frac{\sin\alpha}{\cos\alpha} = \frac{\sin\alpha}{|\cos\alpha|} \rightarrow \cos\alpha$ ⊖

$\rightarrow \alpha$ در ناحیه سوم قرار دارد ✓

۴ (۲)



$\tan(\frac{\pi}{2} - \alpha) = \cot\alpha$

$\cot(51 - \alpha) = -\cot\alpha = \frac{4}{3} \rightarrow \cot\alpha = -\frac{4}{3}$

$\rightarrow \tan(\frac{51}{2} - \alpha) = -\frac{4}{3}$ ✓

۵ (۲)

$$\frac{3\cos(\frac{3\pi}{2} - 22) - 2\sin(51 - 22)}{\sin(51 + 22) - \cos(\frac{3\pi}{2} + 22)} = \frac{-3\sin(22) - 2\sin(22)}{-\sin(22) - \sin(22)} = \frac{5}{2}$$ ✓

۶ (۲)

$$\frac{\sin(\frac{\pi}{2}+\alpha)-\sin(\alpha-\pi)}{|\tan^2\alpha-1|}=\frac{\cos\alpha+\sin\alpha}{|\tan^2\alpha-1|}\xrightarrow{\sin\alpha=-\frac{\sqrt{5}}{3},\cos\alpha=\frac{2}{3}}$$

$$\frac{\frac{2-\sqrt{20}}{3}}{\frac{1}{4}}=\frac{8-4\sqrt{5}}{3}$$ ✓

۷ (۲)

$$\sin\alpha=2\cos\alpha\rightarrow\tan\alpha=2$$

$$1+\tan^2\alpha=\frac{1}{\cos^2\alpha}\rightarrow\frac{1}{\cos^2\alpha}=5\rightarrow\cos\alpha=-\frac{\sqrt{5}}{5}$$ ✓

۸ (۲)

$$\tan 45^\circ=\frac{2m}{1-m^2}=\sqrt{3}\rightarrow\sqrt{3}m^2+2m-\sqrt{3}=0$$

$$\frac{-2\pm\sqrt{16}}{2\sqrt{3}}=m\rightarrow m=-\frac{3}{\sqrt{3}},\frac{1}{\sqrt{3}}\rightarrow|m_2-m_1|=\frac{4}{\sqrt{3}}$$ ✓

۹ (۲)

$$\tan(\frac{\pi}{4}-x)=\frac{1-m}{2+m},\ -\frac{\pi}{4}<x<\frac{\pi}{4}\rightarrow\frac{1-m}{2+m}>0$$

m	-2		1
	$-$ ∄ $+$	$+$	$-$

$\rightarrow m\in(-2,1)$ ✓

۱۰ (۲)

$$\tan 300^\circ=-\sqrt{3},\ \cos 210^\circ=-\frac{\sqrt{3}}{2},\ \tan 480^\circ=\tan 120^\circ=-\sqrt{3}$$

$$\sin 480^\circ=\sin 120^\circ=\frac{\sqrt{3}}{2}$$

$$\tan(300^\circ)\cos(210^\circ)+\tan(480^\circ)\sin(480^\circ)=\frac{3}{2}-\frac{3}{2}=0$$ ✓