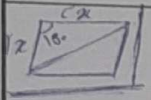


۱۸, ۲۵

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۲۴ کلاس: ۶۱۶ - ۶۱۶



$$S_{\square} = 2S_{\Delta} = 2 \times \left(\frac{1}{2} \times 12 \times \sin 10^\circ \right) = 12 \times \sin 10^\circ \rightarrow x = 18$$

$$x = 5\sqrt{11} \rightarrow \text{مضلع} = 2x, 2x = 10\sqrt{11}, 10\sqrt{11} \Rightarrow P = (10\sqrt{11} + 10\sqrt{11}) \times 2 = 40\sqrt{11}$$

(۲)

$$S_{ABC} - S_{ADE} = \left(\frac{1}{2} \times 5 \times 7 \times \sin A \right) - \left(\frac{1}{2} \times 4 \times 7 \times \sin A \right) = \frac{1}{2} \times 7 \times \sin A (5 - 4) = 1/7 \Rightarrow \sin A = \frac{1}{7}$$

$$\hat{A} \xrightarrow{\text{فرض سوال}} \hat{A} = 90^\circ$$

$$\tan \hat{A} = \frac{\sqrt{3}}{3}$$

(۱, ۷۹)

۲

$$\frac{|\sin \alpha|}{\cos \alpha} = -\frac{\sin \alpha}{\cos \alpha} \Rightarrow \sin \alpha < 0$$

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

$$\begin{aligned} \cos \alpha < 0 &\rightarrow \frac{-1}{\cos \alpha} - \frac{\sin \alpha}{\cos \alpha} = -\frac{1 + \sin \alpha}{\cos \alpha} \checkmark \\ \cos \alpha > 0 &\rightarrow \frac{1}{\cos \alpha} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 + \sin \alpha}{\cos \alpha} \end{aligned}$$

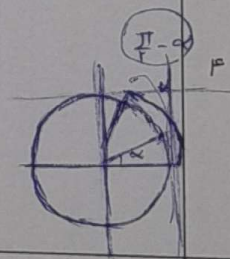
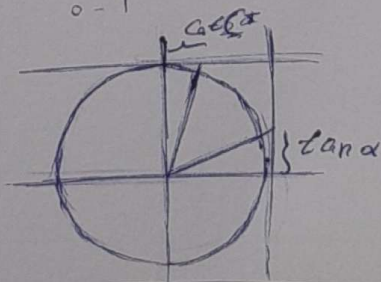
$$\Rightarrow \sin \alpha \cos \alpha < 0 \quad \text{نصف دوم}$$

(۲)

۳

$$\tan \alpha = \frac{1/5 - 0}{0 - 2} = -\frac{1}{10} \Rightarrow \tan \left(\frac{\pi}{2} - \alpha \right) = \cot(\alpha) = \frac{1}{\tan \alpha} = -10$$

$$= -\frac{10}{1} \checkmark$$



(۲)

$$\frac{3 \cos(2\pi) - 2 \sin(1\pi - 2\pi)}{\sin(1\pi + 2\pi) - \cos(2\pi + 2\pi)} = \frac{-3 \sin(2\pi) - 2 \sin(2\pi)}{-\sin(2\pi) - \sin(2\pi)}$$

$$= \frac{-0 \sin(2\pi)}{-2 \sin(2\pi)} = \frac{0}{-2} = 0 \checkmark$$

(۲)

۵

$$\frac{\cos \alpha + \sin \alpha}{|\tan \alpha - 1|} \checkmark$$

$$\sin^2 \alpha + \cos^2 \alpha = 1 \rightarrow \sin^2 \alpha = 1 - \frac{c}{9} \rightarrow \sin \alpha = \frac{\sqrt{5}}{3}$$

$$\rightarrow \left(\frac{2}{c} + \frac{\sqrt{5}}{c} \right) \div \left(\left(\frac{2}{c} \times \frac{c}{\sqrt{5}} \right) - 1 \right) = \frac{2 + \sqrt{5}}{c}$$

$$\rightarrow \frac{2\sqrt{5} + 5}{4 - c\sqrt{5}} = -\frac{2\sqrt{5} + 10}{3}$$

9
*

دو جواب از نظر عددی برابر اند و فقط فرم نوشتاری متفاوت دارند

$$\sin^2 \alpha + \cos^2 \alpha = 1 \xrightarrow{\sin \alpha = \frac{1}{\sqrt{5}}} \cos^2 \alpha + \frac{1}{5} = 1 \rightarrow \cos^2 \alpha = \frac{4}{5} \rightarrow \cos \alpha = \pm \frac{2}{\sqrt{5}}$$

$$\rightarrow \text{برای ربع دوم} = -\frac{1}{\sqrt{5}} = \left(\frac{-\sqrt{5}}{5} \right) \checkmark$$

2
7

$$\tan \alpha = \text{شیب خط} \rightarrow \tan \varphi_0 = -\frac{2m}{m^2 - 1} = \sqrt{5} \rightarrow \frac{m^2 - 1}{2m} = \frac{-1}{\sqrt{5}} \rightarrow 5\sqrt{5}m$$

$$\sqrt{5}m^2 + 2m - \sqrt{5} = 0 \rightarrow x = \frac{-2 \pm \sqrt{12}}{2\sqrt{5}} \rightarrow x = \frac{2}{\sqrt{5}} \text{ و } \frac{-4}{\sqrt{5}}$$

$$\rightarrow \text{اختلاف} = \frac{2}{\sqrt{5}} - \left(\frac{-4}{\sqrt{5}} \right) = \frac{6}{\sqrt{5}} = \frac{6\sqrt{5}}{5} \checkmark$$

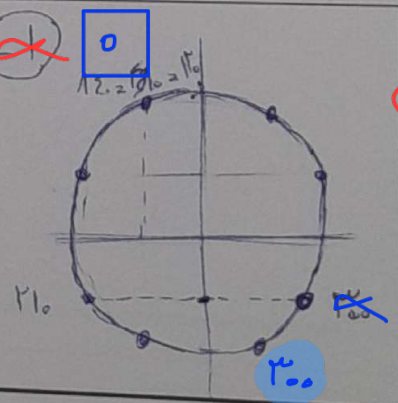
2
1

$$\frac{\pi}{2} < x < \frac{3\pi}{2} \rightarrow \frac{\pi}{2} < -x < \frac{3\pi}{2} \xrightarrow{+\frac{\pi}{2}} 0 < \frac{\pi}{2} - x < \frac{3\pi}{2} \Rightarrow \tan \left(\frac{\pi}{2} - x \right) < \tan \frac{\pi}{2}$$

$$\rightarrow 0 < \frac{1-m}{1+m} < \infty : \text{عبارت مثبت باشد} \Rightarrow \frac{-2}{-1} < \frac{1}{-1} \Rightarrow m \in (-2, 1) \checkmark$$

2
9

$$\left(\frac{-\sqrt{5}}{c} \right) \times \left(\frac{-\sqrt{5}}{2} \right) + \left(-\sqrt{5} \right) \times \left(\frac{\sqrt{5}}{2} \right) = \frac{5}{2} + \left(-\frac{5}{2} \right) = 0$$



1, 2, 3, 4, 5, 6, 7, 8, 9, 10

دقت!

$$\rightarrow \text{فواصله معل} \quad \frac{\cos \alpha + \sin \alpha}{|\tan^2 \alpha - 1|} = \frac{\frac{2}{3} - \frac{\sqrt{5}}{2}}{\frac{5}{4} - 1} = \frac{4(2 - \sqrt{5})}{3} \quad -4$$

$$\cos \alpha = \frac{2}{3} \xrightarrow{\text{ربع 4}} \sin \alpha = -\frac{\sqrt{5}}{2} \quad , \quad \tan \alpha = -\frac{\sqrt{5}}{2} \quad \curvearrowright$$