

الف شمس

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المصدر

$$S = 3x \times 2x \times \sin 120^\circ = 4x^2 \times \frac{1}{2} = 2x^2 = 2\varepsilon \quad (5) \quad .1$$

$$\hookrightarrow x^2 = \varepsilon \rightarrow x = \sqrt{\varepsilon}$$

$$P = 2(3x + 2x) = 10x = 10(\sqrt{\varepsilon}) = 10\sqrt{\varepsilon}$$

$$S_{ABC} - S_{ADE} = \frac{1}{2}(AB)(AC) \sin A - \frac{1}{2}(AD)(AE) \sin A \quad .2$$

$$= \frac{1}{2} \times d \times v \times \sin A - \frac{1}{2} \times v \times \varepsilon \times \sin A \quad (5)$$

$$\hookrightarrow \frac{v}{2} \sin A = \frac{v}{2} \rightarrow \sin A = \frac{1}{2}$$

$$\hookrightarrow \tan = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

$$\frac{1}{\sqrt{\cos^2 \alpha}} - \tan \alpha = \frac{1 + \sin \alpha}{|\cos \alpha|} \rightarrow \frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} = \frac{1}{|\cos \alpha|} + \frac{\sin \alpha}{|\cos \alpha|} \quad .3$$

$$\hookrightarrow -\cos \alpha = |\cos \alpha| \rightarrow \cos \alpha < 0$$

منه

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

$$\left. \begin{matrix} (r, 0) \\ (0, 1/d) \end{matrix} \right\} \rightarrow m = -\frac{r}{\varepsilon} \rightarrow \tan \alpha = -\frac{r}{\varepsilon} \rightarrow \cot \alpha = -\frac{\varepsilon}{r} \quad .4$$

$$\tan\left(\frac{\pi}{2} - \alpha\right) = \cot \alpha = -\frac{\varepsilon}{r}$$

$$r \cos \alpha = \frac{r \pi}{2} - r \quad .5$$

$$1/d \sin \alpha = \pi - r$$

$$r \cos \alpha = \pi + r$$

$$r \sin \alpha = \frac{r \pi}{2} + r$$

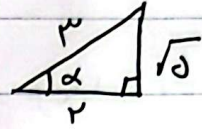
$$\rightarrow \frac{-r \sin \pi - r \sin \pi}{-\sin \pi - \sin \pi} = \frac{-2 \sin \pi}{-2 \sin \pi} = r/d$$

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المسألة 14

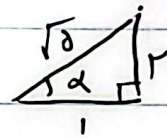
المحور الثاني

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



$$\sin \alpha = 2 \cos \alpha \rightarrow \frac{\sin \alpha}{\cos \alpha} = 2 \rightarrow \tan \alpha = 2 \quad \text{7}$$

$$\tan \alpha = 2 \rightarrow \cos \alpha = -\frac{1}{\sqrt{5}} = -\frac{\sqrt{5}}{5} \quad \text{5}$$



$$m = \tan \alpha = \sqrt{3} \quad \text{8}$$

$$2mx + (m^2 - 1)y = 3 \rightarrow y = \frac{-2mx + 3}{m^2 - 1} \quad \text{5}$$

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

$$\rightarrow m^2 + 2m - 3 = 0 \rightarrow m_1 = -3/\sqrt{3}$$

$$m_2 = 1/\sqrt{3}$$

$$\text{اقتلاف} \rightarrow \left| \frac{1}{\sqrt{3}} - \left(-\frac{3}{\sqrt{3}}\right) \right| = \frac{\varepsilon\sqrt{3}}{3}$$

$$\frac{\pi}{3} < -n < -\frac{\pi}{3} + \frac{\pi}{3} \rightarrow \frac{\pi}{2} < \frac{\pi}{3} - n < 0 \quad \text{5}$$

$$\rightarrow 0 < \tan\left(\frac{\pi}{3} - n\right) < +\infty$$

$$0 < \frac{1-m}{2+m} \rightarrow \frac{-2}{-1+1}$$

$(-2, 1)$

$$\tan(\pi - \alpha) = -\sqrt{3} \quad \sin(\pi - \alpha) = \frac{\sqrt{3}}{2} \quad \text{5}$$

$$\cos(\pi - \alpha) = -\frac{\sqrt{3}}{2}$$

$$\tan(\pi - \alpha) = -\sqrt{3}$$

$$\Rightarrow \tan \pi \cdot \cos \pi + \tan \pi \cdot \sin \pi = 0$$

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