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$$\tan \frac{11\pi}{8} + \sin \frac{13\pi}{8} \times \cos \frac{11\pi}{8} \rightarrow 1 + \frac{\sqrt{2}}{2} \left(-\frac{\sqrt{2}}{2} \right) = 1 + \frac{1}{2} - \frac{1}{2} = 1 \quad (الف)$$

$$\tan \frac{14\pi}{9} \times \sin \frac{11\pi}{9} + \cos \frac{1-\pi}{9} \rightarrow \frac{-1}{\sqrt{3}} \times \frac{-\sqrt{3}}{2} + -\frac{1}{2} = \frac{1}{2} - \frac{1}{2} = 0 \quad (ب)$$

$$\frac{\cos \theta - \sin \theta}{\cos \theta + \sin \theta} \div \sin \theta \rightarrow \frac{\cot \theta - 1}{\cot \theta + 1} = \frac{11}{9} \quad (ج)$$

$$\sin \alpha = r \cos \alpha \rightarrow \frac{\sin}{\cos} = \frac{r \cos}{\cos} = r = \tan \alpha \quad (د)$$

$$\frac{1}{\cos^2} = 1 + \tan^2 \rightarrow \frac{1}{\cos^2} = 1 + \frac{1}{\cos^2} \rightarrow \frac{1}{\cos^2} = \frac{1}{\cos^2} \rightarrow \cos = \pm \frac{1}{\sqrt{5}} \quad \text{چونکہ ربع سوم است}$$

$$\cos \left(\frac{11\pi}{8} + \alpha \right) \rightarrow \cos \left(\frac{9\pi}{8} + \alpha \right) \rightarrow \sin \alpha = \frac{\sqrt{2}}{2} \rightarrow \cos \alpha = 1 - \sin^2 \alpha \quad (ه)$$

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

$$\cos(\alpha + \beta) = \cos \alpha \cos \beta - \sin \alpha \sin \beta \rightarrow \left(-\frac{\sqrt{2}}{2} \right) \left(-\frac{\sqrt{2}}{2} \right) - \left(\frac{\sqrt{2}}{2} \right) \left(\frac{\sqrt{2}}{2} \right) = \frac{2}{4} - \frac{2}{4} = 0 \quad (و)$$

$$\sin \left(\frac{11\pi}{8} + \alpha \right) \rightarrow \sin \left(\frac{9\pi}{8} + \alpha \right) \rightarrow \tan \alpha = \frac{1}{\sqrt{2}} \rightarrow \sin \alpha = \frac{\sqrt{2}}{2} \quad (ز)$$

$$\sin = \frac{\sqrt{2}}{2} \rightarrow \cos = -\frac{\sqrt{2}}{2}$$

$$\rightarrow \left(-\frac{\sqrt{2}}{2} \right) \left(-\frac{\sqrt{2}}{2} \right) + \left(-\frac{\sqrt{2}}{2} \right) \left(\frac{\sqrt{2}}{2} \right) = \frac{2}{4} - \frac{2}{4} = 0 \quad (ح)$$

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$$\frac{P \sin^2 \alpha + \cos^2 \alpha}{\sin^2 \alpha + \sin^2 \alpha + \cos^2 \alpha} = \frac{1}{P} \rightarrow \sin^2 \alpha = \frac{1}{P} \rightarrow \sin \alpha = \frac{1}{\sqrt{P}} \quad \left. \begin{array}{l} \cos^2 \alpha = \frac{P}{P} \rightarrow \cos \alpha = \frac{\sqrt{P}}{P} \\ \tan \alpha = \frac{1}{\sqrt{P}} \end{array} \right\} \quad (2)$$

$$= \frac{1}{\sqrt{P}} \rightarrow \tan^2 \alpha = \frac{1}{P}$$

$$ABC \rightarrow \sqrt{P}, 4, \alpha \rightarrow S_{ABC} = \frac{1}{2} \sqrt{P} \times 4 \times \sin(\alpha) = 2\sqrt{P} \sin(\alpha)$$

$$\rightarrow \sqrt{P} \times \sin(\alpha) = 1 \rightarrow \frac{\sqrt{P} \times \sqrt{P}}{P \sqrt{P}} \times \frac{\sqrt{P}}{\sqrt{P}} = \frac{\sqrt{P}}{P} = \frac{1}{\sqrt{P}} = \sin \alpha$$

$$\rightarrow \frac{\sqrt{P}}{P} = \frac{1}{\sqrt{P}} \rightarrow \sqrt{P} = 1 \rightarrow P = 1$$

$$S = \frac{1}{2} \times 4 \times 4 \times \sin(10^\circ) = 8 \sin(10^\circ)$$

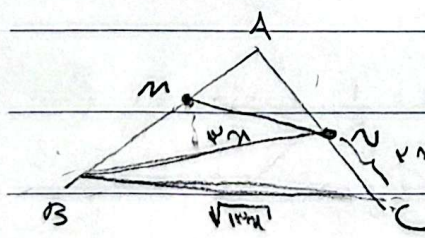
$$\rightarrow \frac{8 \sin(10^\circ)}{4} = 2 \sin(10^\circ) = 1 \rightarrow \sin(10^\circ) = \frac{1}{2}$$

$$\rightarrow 10^\circ = \frac{\pi}{6}$$

$$S_{AED} = \frac{1}{2} \times 1 \times 1 \times \sin \hat{A} = \frac{1}{2} \sin \hat{A}$$

$$S_{ABC} = \frac{1}{2} \times 1 \times 1 \times \sin \hat{A} = \frac{1}{2} \sin \hat{A}$$

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



$$S_{ABC} = \frac{1}{2} \times BC \times h$$

$$S_{AMN} = \frac{1}{2} \times MN \times h_1$$

$$S_{MNCB} = \frac{1}{2} \times (MN + BC) \times h_2$$

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$$1 + \sin \alpha \rightarrow 0 \text{ یا } > 0 \rightarrow \text{موجب یا منفرجه}$$

(1.)

$$\frac{1}{\pm \cos \alpha} - \frac{\sin \alpha}{\cos \alpha} \rightarrow \pm \frac{1 - \sin \alpha}{\cos \alpha} > 0 \rightarrow \text{موجب یا منفرجه}$$

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

$$\frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} > 0 \rightarrow \frac{\cos \alpha - |\cos \alpha| \sin \alpha}{|\cos \alpha| \times \cos \alpha} \rightarrow \cos \alpha = \sin \alpha$$

→ مثبت یا منفرجه