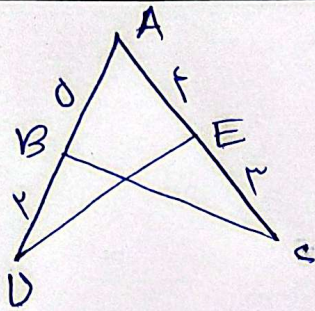


$$\delta f = 3x \times 2x \times \sin 10^\circ$$

$$3x^2 = \delta f \rightarrow x^2 = 11 \rightarrow x = \sqrt{11}$$

$$\Delta = 1 \cdot x = 1 \cdot \sqrt{11} \checkmark$$

(۲)



$$S_{ABC} - S_{ADE} = \left(\frac{1}{2} \times 8 \times 5 \times \sin A\right) - \left(\frac{1}{2} \times 4 \times 2.5 \times \sin A\right)$$

$$= 17.5 \sin A - 5 \sin A = 12.5 \sin A = 17.5$$

$$\Rightarrow \sin A = \frac{1}{2} \Rightarrow A = 30^\circ \Rightarrow \tan A = \frac{\sqrt{3}}{3} \checkmark$$

(۲)

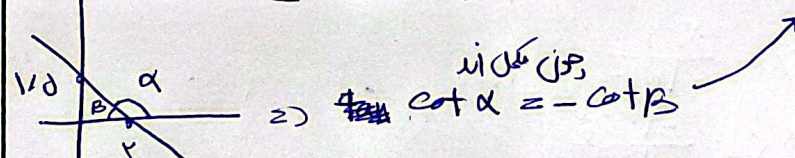
$$\frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 + \sin \alpha}{|\cos \alpha|} \Rightarrow \text{در صورتی با هم برابر هستند که} \Rightarrow \cos \alpha = -1$$

$$\frac{|\sin \alpha|}{\cos \alpha} = -\frac{\sin \alpha}{\cos \alpha} \Rightarrow \text{در صورتی با هم برابر هستند که} \Rightarrow \sin \alpha = -1$$

نام سرم

(۲)

$$\tan\left(\frac{\pi}{4} - \alpha\right) = \cot \alpha = -\cot B = -\frac{4}{3} \checkmark$$



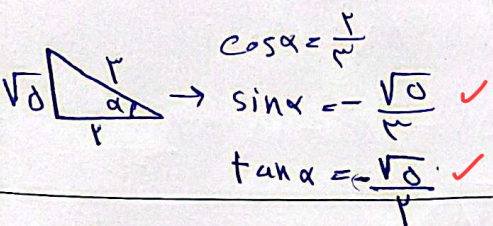
(۲)

$$\frac{3 \cos(27-22) - 2 \sin(11-22)}{\sin(11+22) - \cos(27+22)} = \frac{-3 \sin 22 - 2 \sin 22}{-\sin 22 - \sin 22} = \frac{-5 \sin 22}{-2 \sin 22} = \frac{5}{2} \checkmark$$

(۲)

$\sin(\alpha - \pi) = -\sin\alpha$  وقت!

$$\frac{\cos\alpha + \sin\alpha}{|\tan\alpha - 1|} = \frac{\frac{r}{r} - \frac{\sqrt{5}}{r}}{|\frac{5}{r} - 1|} = \frac{\frac{r - \sqrt{5}}{r}}{|\frac{5 - r}{r}|} = \frac{r - \sqrt{5}}{r} \cdot \frac{r}{r - 5} = \frac{r(r - \sqrt{5})}{r(r - 5)}$$



$\frac{\sin\alpha}{\cos\alpha} = \tan\alpha \Rightarrow \tan\alpha = \frac{1}{\cos\alpha}$   
 $\Rightarrow \cos\alpha = -\frac{1}{\sqrt{5}}$  ✓

$\tan\alpha = \sqrt{3} \Rightarrow \frac{-2m}{m^2 - 1} = \sqrt{3} \Rightarrow \sqrt{3}m^2 + 2m - \sqrt{3} = 0$   
 $\Rightarrow m^2 + 2m - \sqrt{3} = 0 \Rightarrow (m + \sqrt{3})(m - 1) = 0 \Rightarrow m_1 = -\sqrt{3}, m_2 = 1$   
 $\Rightarrow |m_1 - m_2| = \frac{1}{\sqrt{3}} - \frac{-\sqrt{3}}{\sqrt{3}} = \frac{4}{\sqrt{3}}$  ✓

$\frac{\pi}{4} - \pi = \alpha \rightarrow -\frac{3\pi}{4} < \alpha < -\frac{\pi}{4} \rightarrow 0 < \alpha < \frac{\pi}{4} \rightarrow 0 < \tan\alpha < 1$   
 $\Rightarrow 0 < \frac{1 - m}{r + m} < 1 \Rightarrow \begin{cases} \frac{1 - m}{r + m} > 0 \\ \frac{1 - m}{r + m} < 1 \end{cases} \Rightarrow \begin{cases} \frac{1 - m}{r + m} > 0 \\ \frac{1 - m}{r + m} < \frac{r + m}{r + m} \end{cases} \Rightarrow \begin{cases} 1 - m > 0 \\ 1 - m < r + m \end{cases} \Rightarrow \begin{cases} m < 1 \\ 1 - m < r + m \end{cases} \Rightarrow \begin{cases} m < 1 \\ 1 < r + 2m \end{cases}$

$(\frac{-\sqrt{3}}{r}) / (\frac{-\sqrt{3}}{r}) + (\frac{-\sqrt{3}}{r}) / (\frac{\sqrt{3}}{r}) = 1 - 1 = 0$  ✓  
 $(\frac{r}{r}) + (\frac{-r}{r}) = 0$

$$-\frac{\pi}{f} < -u < \frac{\pi}{f} \xrightarrow{+\frac{\pi}{f}} 0 < \frac{\pi}{f} - u < \frac{\pi}{f} \quad \text{ربع اول} \quad 9$$

$$\frac{1-m}{r+m} > 0 \rightarrow \frac{-2}{-1+1-} \quad (-2, 1)$$