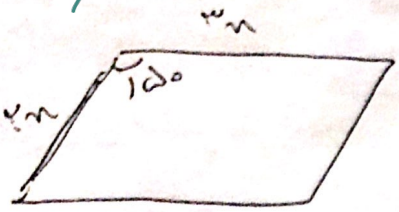
$S = 4m^2 \times \frac{1}{2} = 8\sqrt{2} \rightarrow a = 2\sqrt{2}$ / بسط

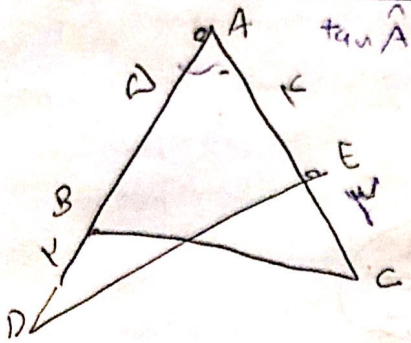
$P = 4 \times 2a = 8\sqrt{2}$



$\frac{1}{2} \times 3m \cdot 2n \times \sin 120° = 6\sqrt{3}$

$\rightarrow m^2 = \frac{6\sqrt{3} \times 2}{\sqrt{3}} \rightarrow m = 4$

$4m + 2n \rightarrow 16$



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

$|S_{ABC} - S_{ADE}| = 1/75$

$\frac{1}{2} \times \sin\hat{A} \times 6 \times 5 - \frac{1}{2} \times \sin\hat{A} \times 4 \times 3 = 1/75$

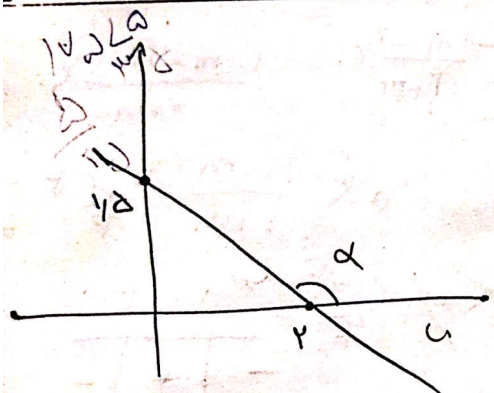
$\rightarrow \frac{1}{2}\sin\hat{A}(5) = \frac{1/75}{10} \times 2 = \frac{5}{2} \rightarrow \sin\hat{A} = \frac{1}{2}$

$\cos\hat{A} = \frac{\sqrt{3}}{2}$

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

$\cos\alpha < 0$ → ناصح سوم

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



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

$\frac{\cos\alpha}{\sin\alpha} = \frac{4}{3}$

$\tan\alpha = \frac{3}{4}$ ← شیب $= \frac{3}{2} = \frac{\text{y}}{\text{x}}$

$\sin\alpha = \frac{3}{5}\cos\alpha$

$\frac{3\cos(248°) - 2\sin(158°)}{\sin(204°) - \cos(248°)} \rightarrow \frac{-3\cos(68°) - 2\sin(22°)}{-\sin(22°) - \cos(68°)}$

$= \frac{-3\sin(22°) - 2\sin(22°)}{-\sin(22°) - \sin(22°)}$

$= \frac{-5}{-2} = \frac{5}{2}$

$\frac{5}{2}$ ← 2/5

$\sin\alpha < 0$

$\cos\alpha = \frac{2}{3} \rightarrow \frac{4}{9} + \sin^2\alpha = 1 \rightarrow \sin^2\alpha = \frac{5}{9} \rightarrow \sin\alpha = -\frac{\sqrt{5}}{3}$

$$\frac{\sin\left(\frac{\pi}{2}+\alpha\right) + \sin(-\alpha+\pi)}{|\tan^2\alpha - 1|} = \frac{\cos\alpha + \sin\alpha}{|\frac{\sin^2\alpha}{\cos^2\alpha} - 1|} = \frac{\frac{2}{3} - \frac{\sqrt{5}}{3}}{|\frac{5}{4} - 1|} = \frac{\frac{2-\sqrt{5}}{3}}{\frac{1}{4}} = \frac{4(2-\sqrt{5})}{3} = \frac{8-4\sqrt{5}}{3}$$

$\sin\alpha = 2\cos\alpha$

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

۹) تعریف نشده $\leftarrow$ اضلاع $\quad m = \pm 1 \;/\; m = \pm 3$

$2mx + (m^2-1)y = 3$

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

$\rightarrow \frac{4m^2}{m^4+1-2m^2} = 3 \hookrightarrow 4m^2 = 3m^4 - 9m^2 + 3$

$3m^4 - 10m^2 + 3 = 0$

$m^4 - 10m^2 + 1 = 0$

$(m^2-1)(m^2-$

۱٫۵

$|m_1 - m_2| = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{16}}{\sqrt{3}} = \frac{4}{\sqrt{3}}$

$-\frac{\pi}{4} < x < \frac{\pi}{4}$

$f = [-1, 1)$

$\tan\left(\frac{\pi}{4} - x\right) = \frac{1-m}{2+m}$

$\frac{\pi}{4} > \frac{\pi}{4} - x > 0$

$+\frac{\pi}{4} > -x > \frac{\pi}{4}$

$\frac{-3m-3}{2+m} < 0$

$\frac{1-m-2m-2}{2+m}$

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

۹) $\tan(300^\circ)\cos(210^\circ) + \tan(120^\circ)\sin(180^\circ) - \tan(120^\circ)\sin(210^\circ) = 0$

$\tan(300^\circ) = \tan(-60^\circ) = -\sqrt{3}$

$\cos(210^\circ) = -\frac{\sqrt{3}}{2}$

$\tan(120^\circ) = -\sqrt{3}$

$\sin(180^\circ) = 0$

$\sin(210^\circ) = -\frac{1}{2}$

$\frac{3}{2} + 0 - \frac{\sqrt{3}}{2} \times -\frac{1}{2} = \frac{3}{2} + \frac{\sqrt{3}}{4}$

$-\frac{3}{2} - \frac{\sqrt{3}}{4} \rightarrow -\frac{6+\sqrt{3}}{4}$

۹) $-\frac{\pi}{6} < \alpha < \frac{\pi}{6} \rightarrow 0 < \alpha - \frac{\pi}{6} < \frac{\pi}{3}$

$\frac{1-m}{2+m} > 0 \rightarrow m \in (-2, 1)$ $\leftarrow$ (+) $\leftarrow$ آمد نسبت $\leftarrow$ ربع اول است $\leftarrow$ کسان در