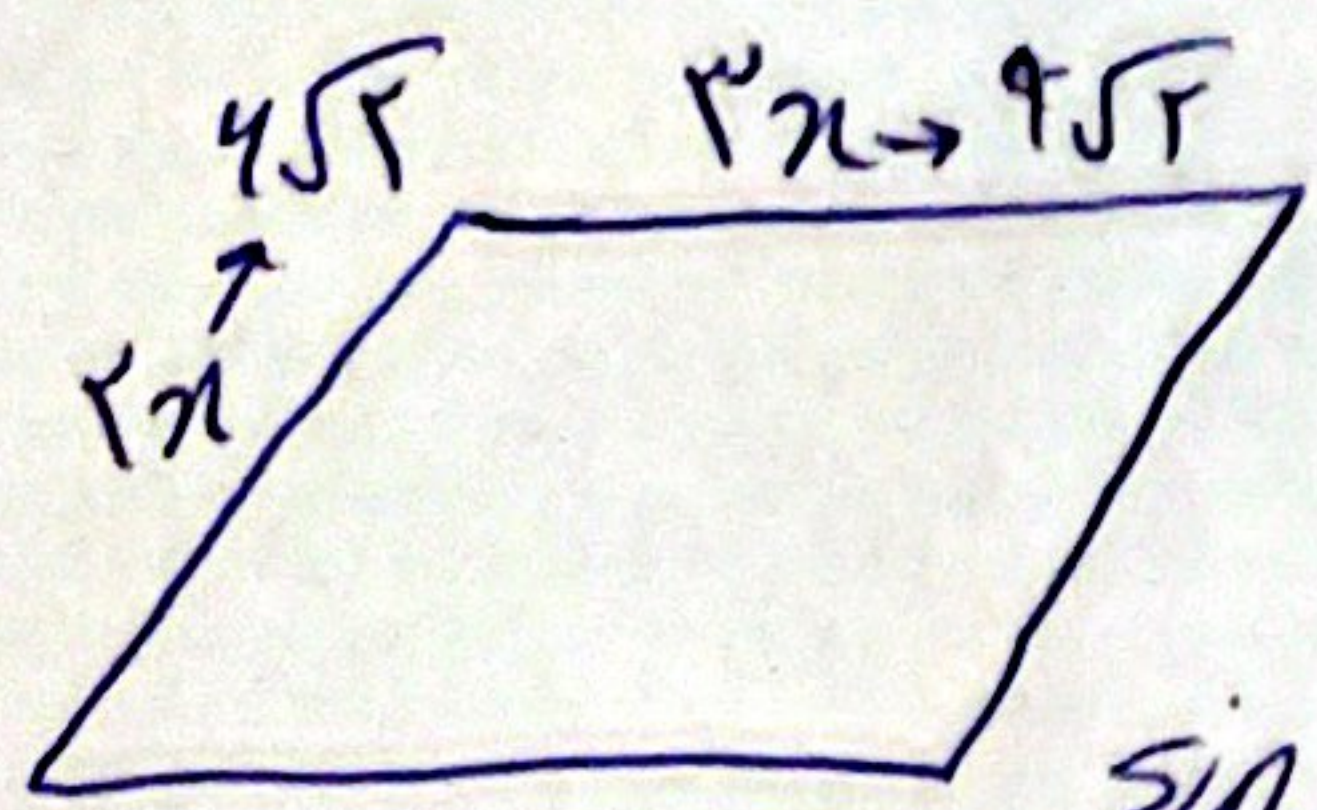


$S_{\Delta} = \frac{1}{2} ab \sin \alpha \rightarrow \frac{1}{2} \times \frac{15}{4} \times \sqrt{2} \times \sin \alpha = \frac{15}{4} \rightarrow \sin \alpha = \frac{15}{15\sqrt{2}} = \frac{1}{\sqrt{2}}$
 $\frac{15}{4} = 15$
 $\sin \alpha = \frac{\sqrt{2}}{2} \rightarrow \alpha = 45^\circ$



$\sin 10^\circ = \frac{1}{2}$

$S_{\Delta} = ab \sin \alpha \rightarrow 4\sqrt{2} \times \frac{1}{2} = a \sin \alpha$

$\frac{1}{2} = \frac{a \sin \alpha}{4\sqrt{2}} = 1 \rightarrow a = \sqrt{2} = 3\sqrt{2}$

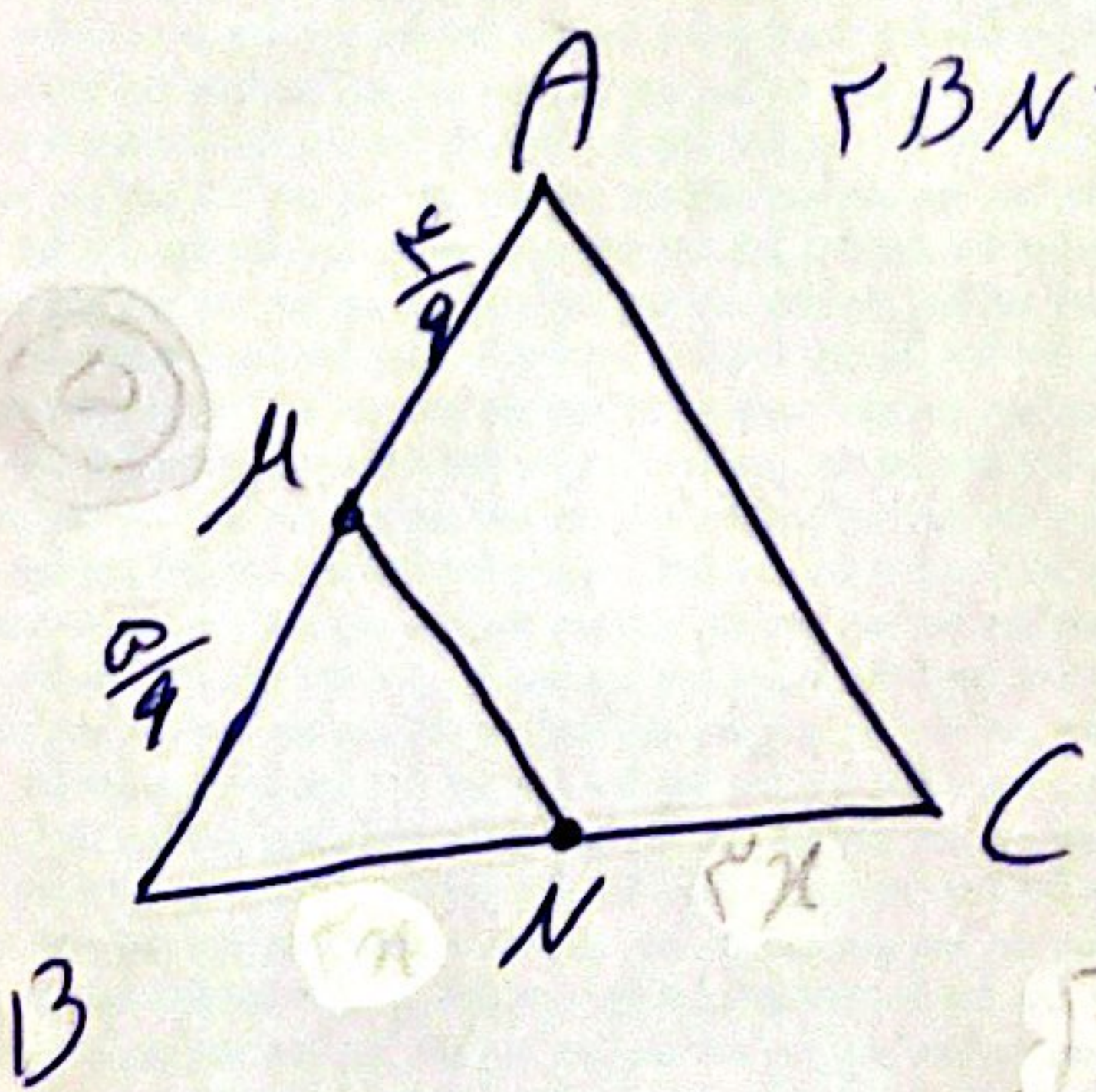
$P = (a+b) \times \frac{1}{2} = (3\sqrt{2} + 4\sqrt{2}) \times \frac{1}{2} = 3.5\sqrt{2}$

$S_{ABC} - S_{ADE} = 11\sqrt{2} \quad \tan A = ? \rightarrow \sin, \cos = ?$

$\frac{1}{2} \times 10 \times V \times \sin A - \frac{1}{2} \times 5 \times V \times \sin A = \frac{11\sqrt{2}}{2}$

$\sin A \left(\frac{10-5}{2} \right) = \frac{11\sqrt{2}}{2} \rightarrow \sin A = \frac{11\sqrt{2}}{5} = \frac{2 \times 11\sqrt{2}}{2 \times 5} = \frac{1}{2}$

$\cos A \Rightarrow 1 - \sin^2 = \cos^2 \rightarrow 1 - \frac{1}{4} = \frac{3}{4} \rightarrow \cos A = \frac{\sqrt{3}}{2} \rightarrow \tan = \frac{1}{\sqrt{3}} = \frac{1}{\sqrt{3}}$



$BM = NC \rightarrow \frac{1}{2} BM = NC \rightarrow BC = BM + \frac{1}{2} BM = \frac{3}{2} BM$

$\frac{S_{ABC}}{S_{BMN}} = 3 \rightarrow \frac{\frac{1}{2} AB \times \frac{3}{2} BM \times \sin B}{\frac{1}{2} \times BM \times BN \times \sin B} = 3$

$\frac{AB}{BM} = \frac{3}{1} \rightarrow \frac{AB}{BM} = \frac{3}{1} \rightarrow BM = \frac{1}{3} AB$

$\frac{BM}{AM} = \frac{1}{2} = \frac{1}{2} = \frac{1}{2}$

$|\sin| = -\sin \leftarrow \frac{|\sin|}{\cos} = -\tan \rightarrow \sin = -$

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

سین نامیہ سور (سب)

$\rightarrow \cos = -$

باران کرانی

$$\text{الف) } -1 + \left(-\frac{\sqrt{2}}{2} \times \frac{\frac{2}{\sqrt{2}}}{2} - \frac{\sqrt{2}}{2} \right) = -\frac{2}{\sqrt{2}}$$

①

$$\text{ب) } -\frac{1}{\sqrt{3}} \times \frac{-\sqrt{3}}{2} + \left(-\frac{1}{2} \right) = \frac{1}{2} - \frac{1}{2} = 0$$

②

$$\cot = f \rightarrow \frac{\cos}{\sin} = f \rightarrow \cos = f \sin$$

$$\frac{12 \sin - \sin}{f \sin + \sin} = \frac{11 \sin}{\omega \sin} = \frac{11}{\omega}$$

③

$$\sin, \cos = -$$

$$\sin = 2 \cos$$

$$\sin^2 + \cos^2 = 1$$

$$(2 \cos)^2 + \cos^2 = 1 \rightarrow 4 \cos^2 + \cos^2 = 1 \rightarrow 5 \cos^2 = 1$$

$$\cos^2 = \frac{1}{5} \rightarrow \cos = -\frac{1}{\sqrt{5}}$$

$$\text{الف) } 1 - \sin^2 = \cos^2 \rightarrow 1 - \frac{2}{10} = \frac{8}{10} \rightarrow \cos = \pm \frac{\sqrt{8}}{10} = \frac{-\sqrt{2}}{10}$$

④

$$\cos\left(\frac{11\pi}{6} + \alpha\right) \rightarrow \cos \frac{11\pi}{6} \times \cos \alpha - \sin \frac{11\pi}{6} \times \sin \alpha = \frac{-\sqrt{2}}{2} \times \frac{\sqrt{2}}{10} - \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{10}$$

$$= \frac{14}{20} - \frac{2}{20} = \frac{12}{20} = \frac{3}{5}$$

$$\text{ب) } \tan = \frac{1}{\sqrt{2}} \rightarrow 1 + \tan^2 = \frac{1}{\cos^2} \rightarrow 1 + \frac{1}{2} = \frac{3}{2} \rightarrow \cos^2 = \frac{2}{3}$$

$$\sin^2 = 1 - \frac{2}{3} = \frac{1}{3} \rightarrow \sin = \pm \frac{1}{\sqrt{3}}$$

$$\cos = \pm \frac{\sqrt{2}}{\sqrt{3}}$$

$$\sin\left(\frac{13\pi}{6} + \alpha\right) = \cos \frac{13\pi}{6} \times \sin \alpha + \sin \frac{13\pi}{6} \times \cos \alpha = \frac{-\sqrt{2}}{2} \times \frac{1}{\sqrt{2}} + \frac{-\sqrt{2}}{2} \times \frac{1}{\sqrt{2}} = \frac{-1}{10} + \frac{-1}{10}$$

$$= \frac{-2}{10} = \frac{-1}{5}$$

⑤

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

$$1 + \cot^2 = \frac{1}{\sin^2} \rightarrow 1 + \cot^2 = 3 \rightarrow \cot^2 = 2 \rightarrow \cot = \frac{1}{\tan} \rightarrow \tan = \frac{1}{\sqrt{2}}$$