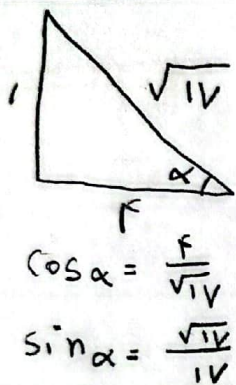


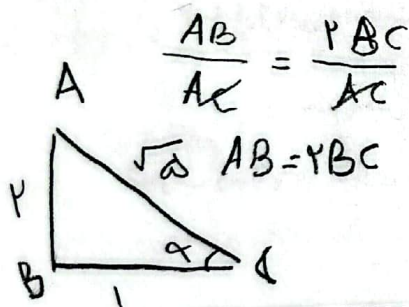
الف)
$$= -1 + \left(-\frac{\sqrt{2}}{2} \times -\frac{\sqrt{2}}{2} \right) = \frac{-1+1}{2} = -\frac{1}{2}$$

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



$$\frac{(2 \times \frac{f}{\sqrt{14}}) - \frac{\sqrt{14}}{14}}{\frac{f}{\sqrt{14}} + 1} = \frac{\frac{11}{\sqrt{14}}}{\frac{5}{\sqrt{14}}} = \frac{11}{5}$$

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



برعکس،

$$\cos \alpha = -\frac{1}{\sqrt{5}} = -\frac{\sqrt{5}}{5}$$

الف) $\cos \frac{11\pi}{6} + \cos \alpha = -\frac{\sqrt{2}}{2} - \frac{\sqrt{91}}{10} =$

$\cos \alpha = \frac{\sqrt{91}}{10}$

$\sin \frac{13\pi}{6} + \sin \alpha = -\frac{\sqrt{2}}{2} + \frac{\sqrt{50}}{10} =$

$\sin \alpha = \frac{\sqrt{50}}{10}$

$\frac{5\sqrt{2} - \sqrt{2}}{10} = \frac{4\sqrt{2}}{10} = \frac{2\sqrt{2}}{5}$

$\frac{2\sqrt{2}}{5}$

$\frac{2\sqrt{2}}{25}$

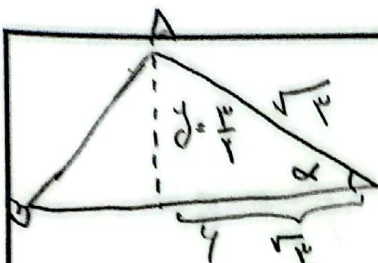
$$2 \sin^2 \theta + \cos^2 \theta = \frac{5}{3}$$

$$\cos^2 \theta + \sin^2 \theta + \sin^2 \theta = \frac{5}{3}$$

$$\sin^2 \theta = \frac{2}{3} \rightarrow \cos^2 \theta = \frac{1}{3}$$

$$\sin \theta = \frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3} \quad \cos \theta = \frac{\sqrt{3}}{3}$$

$$\tan^2 \theta = \frac{\sin^2 \theta}{\cos^2 \theta} = \frac{\frac{2}{3}}{\frac{1}{3}} = 2$$



$$\frac{1}{y} \times y \times y = \frac{y}{y} \rightarrow xy = \frac{y}{y} \quad y = \frac{y}{1}$$

$$1 - \frac{y}{y} = \frac{1-y}{y} = \frac{y}{y} \rightarrow \sqrt{\frac{y}{y}} = \frac{\sqrt{y}}{\sqrt{y}}$$

$$\sin \alpha = \frac{y}{1} = \frac{\sqrt{y}}{\sqrt{y}}$$

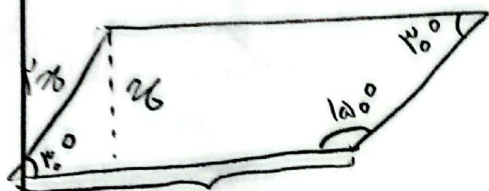
$$\cos \alpha = \frac{\sqrt{y}}{\sqrt{y}} = \frac{1}{1}$$

$$\min \alpha = 90^\circ$$

$$\max \alpha = 180^\circ$$

$$\frac{120}{90} = \frac{y}{1}$$

6



$$1 \times 1 \times 1 = 1$$

$$1 \times 1 = 1$$

$$1 = \sqrt{1}$$

$$1 \times \sqrt{1} = \sqrt{1}$$

$$1 \times \sqrt{1} = \sqrt{1}$$

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

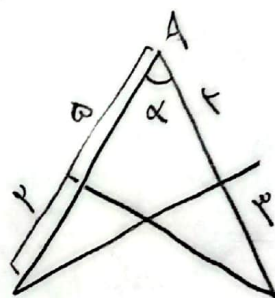
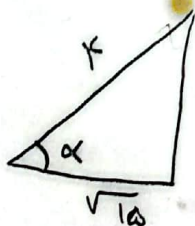
7

$$S_{ABC} = a \times v \times \sin \alpha$$

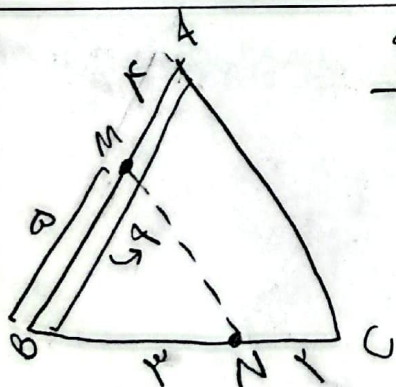
$$S_{ADE} = f \times v \times \sin \alpha$$

$$(a \times v \times \sin \alpha) - (f \times v \times \sin \alpha) = 1/v$$

$$v \sin \alpha \left(\frac{1}{a-f} \right) = 1/v \quad \sin \alpha = \frac{1}{v(a-f)} \quad \tan \alpha = \frac{\sqrt{10}}{10}$$



8



$$\frac{S_{ABC}}{S_{BMN}} = \frac{a \times BA \times \sin B}{1 \times BM \times \sin B} = \frac{a}{1} \times \frac{BA}{BM} = \frac{a}{1}$$

$$a \times BM = a \times BA$$

$$a - a = f$$

$$\frac{BM}{AM} = \frac{a}{f}$$

9

$$\frac{|\sin \alpha|}{\cos \alpha} = -\frac{\sin \alpha}{\cos \alpha} \Rightarrow |\sin \alpha| = -\sin \alpha \rightarrow \sin \alpha \rightarrow \ominus$$

ناتمامه سوم

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

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