

$$S = \frac{1}{2} ab \sin \alpha \rightarrow \frac{1}{2} \times 4 \times \sqrt{3} \times \sin \alpha = \epsilon, a$$

$$2\sqrt{3} \sin \alpha = \epsilon, a$$

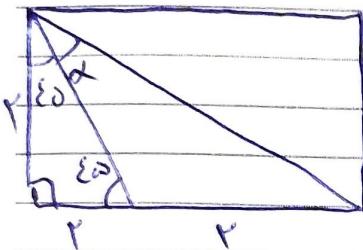
$$\sin \alpha = \frac{\epsilon, a}{2\sqrt{3}} = \frac{\mu}{2\sqrt{3}} = \frac{\sqrt{3}}{2}$$

$$\alpha = 60^\circ$$

$$\frac{120^\circ}{60^\circ} = 2 \text{ بار}$$

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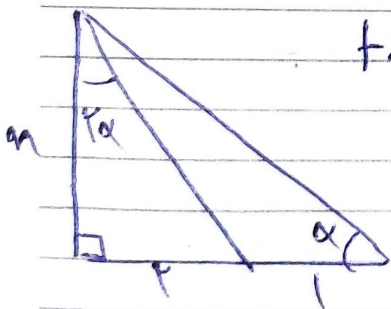


$$\cot(\alpha + \epsilon a) = \frac{2}{\epsilon} = \frac{1}{\mu}$$

$$\cot(\alpha + \epsilon a) = \frac{1 - \tan \alpha \tan \epsilon a}{\tan \alpha + \tan \epsilon a} = \frac{1 - \tan \alpha}{\tan \alpha + 1}$$

$$\frac{1 - \tan \alpha}{\tan \alpha + 1} = \frac{1}{\mu} \rightarrow \mu - \mu \tan \alpha = \tan \alpha + 1$$

$$\tan \alpha = \frac{1}{\mu} \quad \cot \alpha = \mu$$



$$\tan \alpha = \frac{m}{\mu}$$

$$\tan \alpha = \frac{1}{m}$$

$$\tan \alpha = \frac{\mu \tan \alpha}{1 - \tan^2 \alpha} = \frac{\mu m}{9 - m^2}$$

$$\Rightarrow \frac{9m}{9 - m^2} = \frac{1}{m}$$

$$9m^2 = 9 - m^2$$

$$10m^2 = 9$$

$$m^2 = \frac{9}{10}$$

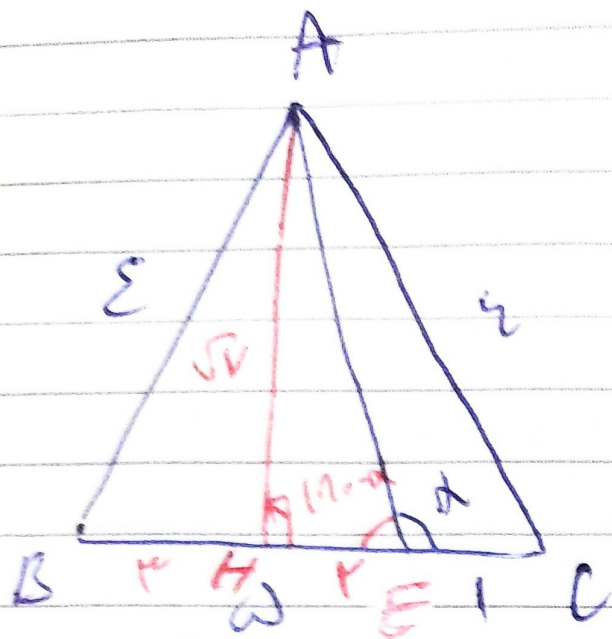
$$m = \frac{3}{\sqrt{10}}$$

+ ...

$$\tan \alpha = \frac{m}{\mu} = \frac{\frac{3}{\sqrt{10}}}{\frac{3}{\sqrt{10}}} = 1$$

$$\cot \alpha = 1$$

| شنبه | شنبه | شنبه | شنبه | شنبه | شنبه |
|------|------|------|------|------|------|
| ۵ | ۴ | ۳ | ۲ | ۱ | |
| ۱۲ | ۱۱ | ۱۰ | ۹ | ۸ | ۷ |
| ۱۹ | ۱۸ | ۱۷ | ۱۶ | ۱۵ | ۱۴ |
| ۲۶ | ۲۵ | ۲۴ | ۲۳ | ۲۲ | ۲۱ |
| | | | ۲۰ | ۱۹ | ۱۸ |



ABC → ارتفاع $AH = \sqrt{V}$
 متساوية الساقين

(ع)

مستقيم → $AH = \sqrt{V}$
 AHC

(د)

$$AEH \rightarrow \rightarrow \tan(110^\circ - \alpha) = \frac{\sqrt{V}}{r}$$

$$\tan(110^\circ - \alpha) = -\tan \alpha$$

$$\rightarrow \tan \alpha = \frac{\sqrt{V}}{r}$$

$$\sin^2 m + \sin^2 m + \cos^2 m = \frac{\epsilon}{r}$$

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$$\sin^2 m = \frac{1}{r} \rightarrow \sin m = \frac{1}{\sqrt{r}}$$

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

$$\frac{1}{r} + \cos^2 m = 1 \rightarrow \cos^2 m = \frac{r-1}{r} \quad \cos m = \frac{\sqrt{r-1}}{\sqrt{r}}$$

$$\tan^2 = \left(\frac{\frac{1}{\sqrt{r}}}{\frac{\sqrt{r-1}}{\sqrt{r}}} \right)^2 = \frac{1}{r-1} \rightarrow \tan = \frac{1}{\sqrt{r-1}}$$

توان $\frac{1}{\sqrt{r-1}}$ را می توان در هر دو طرف \sin و \cos در هر دو طرف ضرب کرد

$$\frac{\sin^2 \alpha + \epsilon(1 - \sin^2 \alpha)}{1 + (1 - \sin^2 \alpha)} - \frac{\cos^2 \alpha + \epsilon(1 - \cos^2 \alpha)}{1 + (1 - \cos^2 \alpha)}$$

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$$\frac{\sin^2 \alpha + \epsilon - \epsilon \sin^2 \alpha}{r - \sin^2 \alpha} - \frac{\cos^2 \alpha + \epsilon - \epsilon \cos^2 \alpha}{r - \cos^2 \alpha}$$

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$$\frac{(r - \sin^2 \alpha)^r}{r - \sin^2 \alpha} - \frac{(r - \cos^2 \alpha)^r}{r - \cos^2 \alpha} = r - \sin^2 \alpha - r + \cos^2 \alpha$$



جمله

$$= \cos^2 \alpha - \sin^2 \alpha = \cos(2\alpha)$$

$$\sin\left(\frac{9\pi}{r} + \alpha\right) \cos\left(\frac{9\pi}{r} - \alpha\right) + \tan\left(\alpha - \frac{10\pi}{r}\right) \rightarrow$$

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$$\cos(\alpha) \times \sin(\alpha) + \cot(\alpha)$$

$$-\frac{r}{\omega} \times \frac{\epsilon}{\omega} + \frac{r}{\epsilon} = \frac{r\epsilon}{\omega^2} + \frac{r}{\epsilon}$$

$$1 + \tan^2 = \frac{1}{\cos^2} \xrightarrow{\text{مربع}} \cos^2 = \frac{r}{\omega}$$

$$\sin^2 + \cos^2 = 1 \xrightarrow{\text{مربع}} \sin^2 = \frac{\epsilon}{\omega}$$

$$\mu \cos \epsilon m + \sqrt{r} (\sin m - \cos m) \quad (1)$$

$$\mu \cos \frac{\pi}{4} + \sqrt{r} (\sqrt{r} \sin (\frac{\pi}{4} - \frac{\pi}{4}))$$

$$\frac{\mu}{r} + r \sin (-\frac{\pi}{4}) = \frac{\mu}{r} - 1 = \frac{1}{r} \quad (2)$$

$$\tan \alpha = \frac{r \tan \frac{\alpha}{r}}{1 - \tan^2 \frac{\alpha}{r}} = \frac{\frac{1}{r}}{\frac{10}{14}} = \frac{14}{10} \quad (9)$$

$$\cos \alpha = \frac{1 - \tan^2 \frac{\alpha}{r}}{1 + \tan^2 \frac{\alpha}{r}} = \frac{1 - \frac{1}{14}}{1 + \frac{1}{14}} = \frac{10}{14}$$

$$\sin \alpha = \frac{r \tan \frac{\alpha}{r}}{1 + \tan^2 \frac{\alpha}{r}} = \frac{\frac{1}{r}}{1 + \frac{1}{14}} = \frac{1}{14}$$

$$\frac{\tan \alpha - \sin \alpha}{\sin \alpha - \cos \alpha} = \frac{\frac{14}{10} - \frac{1}{14}}{\frac{1}{14} - \frac{10}{14}} = \frac{14}{100}$$

$$\left\langle \frac{\cos \alpha}{\sin \alpha} \right\rangle \rightarrow \left\langle \frac{\cos \alpha}{\sin \alpha} \right\rangle \rightarrow \left\langle \frac{\cos \alpha}{\sin^2 \alpha} \right\rangle \rightarrow \cos \alpha \rightarrow + \quad (10)$$

$$r \sin \alpha \left\langle \sin \alpha \right\rangle \rightarrow \cancel{\sin \alpha} \left\langle \cancel{\sin \alpha} \cos \alpha \right\rangle \rightarrow \sin \alpha \rightarrow +$$

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