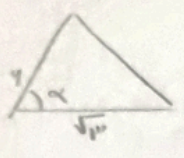


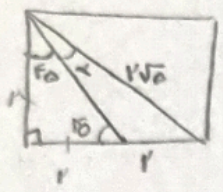
۱۴

۲۷ شهر زادشهری



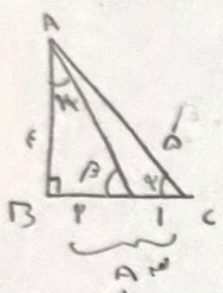
$$S_{\text{شکل}} = \frac{1}{2} \times \text{K} \times \text{D} \times \sin \alpha \rightarrow \frac{1}{2} \times 4 \times \sqrt{3} \times \frac{1}{2} \times \sin \alpha \rightarrow \sin \alpha = \frac{\sqrt{3}}{2}$$

$\alpha = 4$
 $\alpha = 11$



$$\text{Cot}(\pi + \alpha) = \frac{1}{r} \quad \frac{1}{r} = \frac{\text{Cot} \alpha \text{ Cot} \pi - 1}{1 + \text{Cot} \alpha} \rightarrow 1 + \text{Cot} \alpha = r \text{ Cot} \alpha - r$$

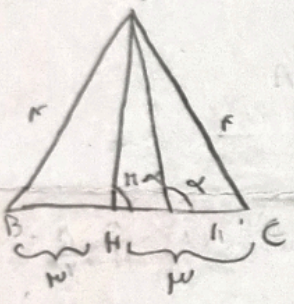
$\mu = \text{Cot} \alpha$



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$$\text{Cot} \alpha = \frac{r}{1}$$

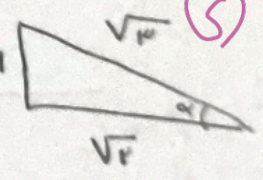
$\tan B = \frac{AD}{AB} \rightarrow \tan \alpha = \frac{r}{1}$ $\tan C = \frac{AB}{AC} \rightarrow \tan \alpha = \frac{1}{r}$
 $\rightarrow \tan \alpha \rightarrow \frac{r}{1} = \frac{r \times \frac{1}{r}}{1 - \frac{1}{r^2}} \rightarrow \alpha = \frac{r}{r} \quad \tan \alpha = \frac{1}{r}, \text{Cot} \alpha = r$



$$AC^2 = AH^2 + HC^2 \rightarrow 14 = AH^2 + 9 \rightarrow AH = \sqrt{5}$$

$$\tan(\pi - \alpha) = \frac{\sqrt{5}}{r} \rightarrow -\tan \alpha = \frac{\sqrt{5}}{r} \rightarrow \tan \alpha = \frac{\sqrt{5}}{r}$$

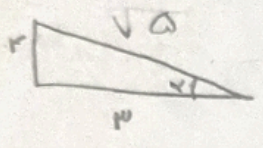
$$r \sin^2 \alpha = r \sin^2 \alpha \times \frac{r}{r} \rightarrow 1 + \sin^2 \alpha = \frac{r}{r} \rightarrow \sin^2 \alpha = \frac{1}{r} \rightarrow \sin \alpha = \frac{1}{\sqrt{r}}$$



$$\begin{aligned}
 & 1) \frac{\sin^2 \alpha + r(1 - \sin^2 \alpha)}{1 + (1 - \sin^2 \alpha)} = \frac{\cos^2 \alpha + r(1 - \cos^2 \alpha)}{1 + (1 - \cos^2 \alpha)} \\
 & = \frac{(r - \sin^2 \alpha)^2}{r - \sin^2 \alpha} - \frac{(r - \cos^2 \alpha)^2}{r - \cos^2 \alpha} = r - \sin^2 \alpha - r + \cos^2 \alpha \\
 & = \cos^2 \alpha
 \end{aligned}$$

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$$\sin\left(\frac{H}{V} + \alpha\right) \cos\left(\frac{H}{V} - \alpha\right) - \tan\left(\alpha - \frac{H}{V}\right) \rightarrow -\cos\alpha - \sin\alpha + \cot\alpha =$$



$$\frac{H}{V} \times \frac{H}{V} + \frac{H}{V} = -\frac{H}{V} + \frac{H}{V} = \frac{-H + V}{V} = \frac{V-H}{V}$$

$$\left[\frac{V-H}{V} \right]$$

$$\frac{H}{V} = 10'$$

$$P \cos \theta + \sqrt{P} \left(\frac{\sin \alpha - \cos \alpha}{\sqrt{P} \sin(\frac{H}{V})} \right) = P \cos \theta + P \sin \theta \rightarrow P \times \frac{1}{V} + P \times \frac{1}{V} = \frac{2P}{V}$$

$$\frac{\sin \alpha - \sin \alpha}{\cos \alpha} \div \frac{\sin \alpha - \sin \alpha \cos \alpha}{\sin \alpha \cos \alpha - \cos \alpha} \Rightarrow \sin \alpha - \frac{1}{V} \sin \alpha$$

$$\tan \alpha = \frac{r \tan \frac{\alpha}{V}}{1 - \tan \frac{\alpha}{V}} = \frac{1}{10} \quad \cot \alpha = \frac{10}{14}, \quad \sin \alpha = \frac{1}{14}$$

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

$$\frac{\cot \alpha}{\sin \alpha} \rightarrow \frac{\cos \alpha}{\sin \alpha} \rightarrow \frac{\cos \alpha}{\sin \alpha} \rightarrow \cos \alpha \rightarrow$$

$$P \sin \alpha \div P \sin \alpha \cos \alpha \rightarrow P \sin \alpha \cos \alpha - P \sin \alpha \rightarrow P \sin \alpha (\cos \alpha - 1) \rightarrow$$

