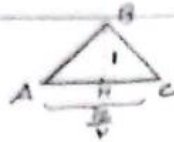


$$T = \frac{P}{|a|} = \frac{P}{Y} = AC$$



$$\alpha = 0 \rightarrow \tan \frac{P}{Y} = 1 = BH$$

$$S_{ABC} = \frac{1 \times \frac{P}{Y}}{Y} = \frac{P}{Y}$$

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$$\begin{aligned} \frac{P}{9} - \frac{Y}{Y} (\sin \alpha) - \frac{1}{Y} (1 - \sin^2 \alpha) &= 0 \rightarrow \frac{1}{Y} \sin^2 \alpha - \frac{Y}{Y} \sin \alpha + \frac{Y}{Y^2} = 0 \\ \rightarrow 9 \sin^2 \alpha - Y^2 \sin \alpha + Y &= 0 \rightarrow \sin^2 \alpha - Y^2 \sin \alpha + Y^2 = 0 \rightarrow (\sin \alpha - Y)(\sin \alpha - Y) = 0 \\ \rightarrow \begin{cases} \frac{Y}{9} = \frac{1}{Y} = \sin \alpha \checkmark \rightarrow \cos \alpha = \frac{Y\sqrt{Y}}{Y} \rightarrow 1 + \tan^2 \alpha = \frac{9}{1} \rightarrow \tan \alpha = \frac{\sqrt{Y}}{Y} \\ \frac{Y}{9} = \frac{Y}{Y} = \sin \alpha \text{ غلط} \end{cases} \end{aligned}$$

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$$\begin{aligned} \log \left(-\frac{\sin \alpha}{\cos \alpha} \right) &= \log Y \rightarrow -\frac{\sin \alpha}{\cos \alpha} = Y \rightarrow \sin \alpha = -Y \cos \alpha \\ \sin^2 \alpha + \cos^2 \alpha &= \cos^2 \alpha = 1 \rightarrow \cos \alpha = \frac{\sqrt{10}}{10} \quad \sin \alpha = -\frac{Y\sqrt{10}}{10} \\ \sin \alpha - \cos \alpha &= -\frac{Y\sqrt{10}}{10} = -\frac{Y\sqrt{10}}{10} \end{aligned}$$

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$$\begin{aligned} \sin^2 \alpha + 1 - \sin^2 \alpha &= \frac{Y}{\Delta} \rightarrow \sin^2 \alpha - \sin^2 \alpha + \frac{1}{\Delta} = \frac{Y}{\Delta} \rightarrow \Delta \sin^2 \alpha - \Delta \sin^2 \alpha + 1 = Y \\ \rightarrow \Delta &= Y(0 - Y(\Delta)(1)) = \Delta \rightarrow \sin^2 \alpha \begin{cases} \frac{\Delta + \sqrt{\Delta}}{Y} \\ \frac{\Delta - \sqrt{\Delta}}{Y} \end{cases} \rightarrow \cos^2 \alpha \begin{cases} \frac{\sqrt{\Delta} - Y}{Y} \text{ غلط} \\ \frac{-\sqrt{\Delta} - Y}{Y} \text{ غلط} \end{cases} \end{aligned}$$

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$$\begin{aligned} \frac{Y \sin \alpha + \sin \alpha \cos \alpha}{Y \sin^2 \alpha} < 0 &\rightarrow \frac{Y + \cos \alpha}{Y \sin \alpha} < 0 \rightarrow \sin \alpha < 0 \\ \frac{\sin^2 \alpha - 1}{\cos \alpha} > 0 &\rightarrow \frac{\cos^2 \alpha}{\cos \alpha} = \cos \alpha > 0 \\ \cos \alpha > 0, \sin \alpha < 0 &\rightarrow \boxed{\text{پایین چپ}} \end{aligned}$$



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$$Y \cos x + Y \sin x = 0 \rightarrow \tan x = -\frac{Y}{Y}, \cot x = -\frac{Y}{Y}$$

$$\tan x + \cot x \rightarrow -\frac{Y}{Y} - \frac{Y}{Y} = -\frac{1Y}{Y}$$

8

$$\frac{\sqrt{1 + \cos 10^\circ}}{\cos 5^\circ + \cos 10^\circ} = \frac{\sqrt{Y \cos 5^\circ - 1 + 1}}{Y \cos 5^\circ - 1 + \cos 5^\circ} = \frac{\sqrt{Y} \cos 5^\circ}{(\cos 5^\circ + 1)(Y \cos 5^\circ - 1)}$$

Y

$$\cos 10^\circ \times \cos 5^\circ \times \cos 5^\circ \times \frac{\sin 10^\circ}{\sin 5^\circ} = \frac{\frac{1}{\Lambda} \sin 10^\circ}{\sin 10^\circ} = \frac{1}{\Lambda} \cot 10^\circ$$

Λ

$$\sin \alpha = Y - Y \cos \alpha \rightarrow \sin^2 \alpha + \cos^2 \alpha = Y + 9 \cos^2 \alpha - 1Y \cos \alpha + \cos^2 \alpha = 1$$

$$\rightarrow 10 \cos^2 \alpha - 1Y \cos \alpha + Y = 1 = t$$

$$\Delta \cos^2 \alpha - 1Y \cos \alpha = \Delta (Y \cos^2 \alpha - 1) - 1Y \cos \alpha = 10 \cos^2 \alpha - 1Y \cos \alpha - \Delta = \frac{t}{9} - 9 = -\frac{\Lambda}{9}$$

$$Y \sin \hat{B} \sin \hat{C} = 1 + \cos \hat{A} \rightarrow \cos \hat{A} = Y \sin \hat{B} \sin \hat{C} - 1$$

$$Y \sin^2 \hat{B} \sin^2 \hat{C} - Y \sin \hat{B} \sin \hat{C} + 1 = \cos^2 \hat{A} = 1 - \sin^2 \hat{A}$$

$$Y \sin^2 \hat{B} \sin^2 \hat{C} - Y \sin \hat{B} \sin \hat{C} + \sin^2 \hat{A} = 0$$

1.