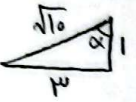


$$A = T = \frac{\pi}{|b|} = \frac{\pi}{r} \quad x=0 \rightarrow y = \tan \frac{\pi}{r} = 1 \quad B=1 \quad S_{\triangle ABC} = \frac{AC \times BH}{r} = \frac{\frac{\pi}{r} \times 1}{r} = \frac{\pi}{r^2} \quad (1)$$

$$\left(\frac{r}{r}\right)^r - \sin \alpha \left(\frac{r}{r}\right) - \frac{1}{r}(1 - \sin^r \alpha) = 0 \quad \frac{1}{r} \sin^r \alpha - \frac{r}{r} \sin \alpha + \frac{r}{r^2} = 0 \xrightarrow{\times r^2} r \sin^r \alpha - r^2 \sin \alpha + r = 0 \quad (2)$$

$$\sin \alpha = \frac{r}{r} \quad \text{و غایه} \quad \sin \alpha = \frac{1}{r} \rightarrow \cos \alpha = \frac{\sqrt{r^2 - 1}}{r} \quad 1 + \tan^r \alpha = \frac{1}{\cos^r \alpha} = \frac{1}{\frac{r}{r}} = \frac{r}{r}$$

$$\log \frac{\sin \alpha}{-\cos \alpha} = \log r \quad \frac{\sin \alpha}{-\cos \alpha} = r \quad -\tan = r \quad \tan = -r \quad \sin \alpha > 0 \rightarrow \cos \alpha < 0 \quad (3)$$


$$\sin \alpha = \frac{r}{r} \quad \cos \alpha = \frac{-1}{\sqrt{r^2 - 1}} \quad \sin \alpha - \cos \alpha = \frac{r}{r} - \left(-\frac{1}{\sqrt{r^2 - 1}}\right) = \frac{r}{r} = \frac{\sqrt{r^2 - 1}}{r}$$

$$\sin^r \theta + 1 - \sin^r \theta = \frac{r}{r} \quad \cos^r \theta + \sin^r \theta = (1 - \sin^r \theta)^r + \sin^r \theta = 1 - r \sin^r \theta + \sin^r \theta + \sin^r \theta \quad (4)$$

$$\sin^r \theta - \sin^r \theta + 1 = \frac{r}{r} \rightarrow \text{خود سوال داده بود}$$

$$\sin x \tan x - \frac{1}{\cos x} > 0 \quad \frac{\sin^r x - 1}{\cos x} > 0 \quad \frac{-\cos^r x}{\cos x} > 0 \rightarrow -\cos x > 0 \quad \cos x < 0 \quad (5)$$

$$\frac{\sin x (r + \cos x)}{r(1 - \cos^r x)} < 0 \quad \frac{\sin x (r + \cos x)}{r \sin^r x} < 0 \quad \frac{r + \cos x}{r} > 0 \rightarrow \sin x < 0 \quad \text{نامعلوم}$$

$$\frac{r \cos x + r \sin x}{\sin x \cos x} = 0 \quad r \cos x = -r \sin x \quad \cot x = -\frac{r}{r} \rightarrow \tan x = -\frac{r}{r} \quad \tan x + \cot x = -\frac{r}{r} - \frac{r}{r} = -\frac{r}{r} \quad (6)$$

$$1 + \sin \alpha_0 = \sin^r \alpha_0 + \cos^r \alpha_0 + r \sin \alpha_0 \cos \alpha_0 = (\sin \alpha_0 + \cos \alpha_0)^r \quad (7)$$

$$\sin \alpha_0 + \sin \alpha_0 = \sin(\alpha_0 + \alpha_0) + \sin(\alpha_0 - \alpha_0) = \sin^r \alpha_0 \cos^r \alpha_0 + \cos^r \alpha_0 \sin^r \alpha_0 + \sin^r \alpha_0 \cos^r \alpha_0 - \cos^r \alpha_0 \sin^r \alpha_0$$

$$= r \sin^r \alpha_0 \cos^r \alpha_0 \quad \frac{\sin^r \alpha_0}{r} = \cos^r \alpha_0$$

$$\frac{\sqrt{(\sin^r \alpha_0 + \cos^r \alpha_0)^r}}{\cos^r \alpha_0} = \frac{\sin^r \alpha_0 + \cos^r \alpha_0}{\cos^r \alpha_0} = \frac{\sqrt{r} \sin(\alpha_0 + \frac{\pi}{r})}{\cos^r \alpha_0} = \frac{\sqrt{r} \sin \alpha_0}{\cos^r \alpha_0} \quad \frac{\sin \alpha_0}{\cos^r \alpha_0} = \cos^r \alpha_0 \rightarrow \sqrt{r}$$

$$\cos \alpha_0 \times \cos^r \alpha_0 \times \cos^r \alpha_0 \xrightarrow{\times \frac{\sin \alpha_0}{\sin \alpha_0}} \frac{\sin \alpha_0 \cos \alpha_0 \cos^r \alpha_0 \cos^r \alpha_0}{\sin \alpha_0} = \frac{\frac{1}{r} \sin^r \alpha_0 \cos^r \alpha_0 \cos^r \alpha_0}{\sin \alpha_0} \quad (8)$$

$$= \frac{\frac{1}{r} \sin^r \alpha_0 \cos^r \alpha_0}{\sin \alpha_0} = \frac{1}{r} \frac{\sin \alpha_0}{\sin \alpha_0} \quad \frac{\sin \alpha_0}{\sin \alpha_0} = \cos \alpha_0 \rightarrow \frac{1}{r} \cot \alpha_0$$

$$\sin \alpha + r \cos \alpha = r \div \cos \alpha \rightarrow \tan \alpha + r = \frac{r}{\cos \alpha} \quad \tan \alpha = \frac{r - r \cos \alpha}{\cos \alpha} \quad 1 + \tan^r \alpha = \frac{1}{\cos^r \alpha} \quad (9)$$

$$\left(\frac{r - r \cos \alpha}{\cos \alpha}\right)^r + 1 = \frac{1}{\cos^r \alpha} \quad \frac{r + r \cos^r \alpha - r \cos \alpha}{\cos^r \alpha} + 1 = \frac{1}{\cos^r \alpha} \quad \frac{r \cos^r \alpha - r \cos \alpha + r}{\cos^r \alpha} = \frac{1}{\cos^r \alpha}$$

$$\cos^r \alpha = r \cos^r \alpha - 1 \quad r \cos^r \alpha - r \cos \alpha = r \cos^r \alpha - r - r \cos \alpha = -r$$

$$\sin B \sin C = \frac{1 + \cos A}{r} \quad r \sin B \sin C = 1 + \cos A \quad r \sin B \sin C = 1 + \cos(\pi - (B + C)) \quad (10)$$

$$r \sin B \sin C = 1 - \cos B \cos C + \sin B \sin C \quad \sin B \sin C + \cos B \cos C = 1 - \cos(B + C)$$

$$\cos(B - C) = 1 \quad B - C = \begin{cases} \pi \\ 0 \end{cases} \quad \text{و غایه} \quad B = C = \sqrt{r} \quad A = 180 - r(\sqrt{r}) = r^2$$