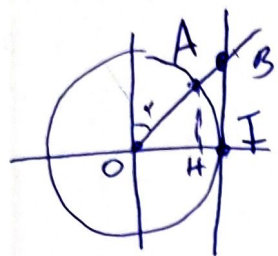
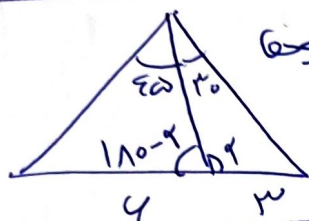


$$\cos \alpha = \frac{OH}{OA} = \frac{OA}{OB} \rightarrow OH = \frac{1}{OB} \xrightarrow{OH = \cos \alpha} OB = \frac{1}{\cos \alpha} \quad (1)$$



$$AB \rightarrow OB - OA \quad \frac{1}{\cos \alpha} - 1 \quad AB = \frac{1 - \cos \alpha}{\cos \alpha}$$



$$\sin \alpha \rightarrow \frac{y}{\sin \alpha} = \frac{h}{\sin 180}$$

$$S = \frac{1}{r} \times \log_r^y \times \log_r^y \times \sin \frac{1}{r} \rightarrow \frac{y}{r} \times \log_r^y \times \log_r^y \quad \frac{y}{r} \log_r^y \rightarrow \frac{y}{r} \times \frac{1}{r} = \frac{y}{r^2}$$

$$r \cos \alpha = 1 \quad r = \cos \alpha \quad r \cos^2 \alpha - \cos^2 \alpha - \sin^2 \alpha (\underbrace{r \sin^2 \alpha - 1}_{\cos^2 \alpha}) = 1 \quad (2)$$

$$r \cos^2 \alpha - (\cos^2 \alpha + \sin^2 \alpha) \times \cos^2 \alpha = 1$$

$$r \cos^2 \alpha - \cos^2 \alpha = 1 \quad r \cos^2 \alpha - 1 = \cos^2 \alpha \quad \cancel{r \cos^2 \alpha} = \cancel{\cos^2 \alpha} - 1$$

$$\cos^2 \alpha = \cos^2 \alpha \quad (\cos^2 \alpha = 1) \quad \cos \alpha = \pm 1 \quad \sin^2 \alpha = r \sin^2 \alpha \quad \sin \alpha = r \sin \alpha$$

$$f(x) = r \sin \alpha (\cos \alpha + r) \rightarrow -\sin^2 \alpha + r \quad [-\pi, \pi]$$



$$\rightarrow y = r \cos(r \alpha + \frac{\pi}{r}) + 1 \rightarrow -r \sin(r \alpha) + 1$$

$$T = \frac{r \pi}{\pi} = r$$

$$f(x) = a + b \frac{1}{r} \sin(r \alpha) \cos(r \alpha) \rightarrow a + \frac{b}{r} \sin(r \alpha)$$

$$T = \frac{\omega \pi}{10} - \frac{\pi}{10} = \frac{r \pi}{\omega} \quad \frac{r \pi}{|\epsilon| \omega} = \frac{r \pi}{\omega} \quad (\omega = \pm \frac{\omega}{\epsilon} \rightarrow \frac{\omega}{\epsilon})$$

$$\frac{y_{\max} + y_{\min}}{r} = a \quad a = r \quad \frac{bc}{a} = \frac{-r \times \frac{\omega}{\epsilon}}{r} = -\frac{\omega}{\epsilon}$$

$$\frac{y_{\max} - y_{\min}}{r} = |b| \quad b = \pm r \quad b = -r$$

$$T \rightarrow \frac{r\alpha}{b} = \pi \quad b=r$$

(9)

$$\frac{y_{\max} + y_{\min}}{2} = c \quad c = -1 \quad \frac{y_{\max} - y_{\min}}{2} = |a| \quad a = \pm 3 \xrightarrow{\text{مقدور}} a = -3$$

$$y = -3 \cos 2\alpha - 1 \quad \alpha = ? \xrightarrow{!} 0 = -3 \cos 2\alpha - 1 \quad \cos 2\alpha = -\frac{1}{3}$$

$$\rightarrow \sin 2\alpha = \frac{2\sqrt{2}}{3} \quad \left| \tan 2\alpha \right| = \left| \frac{\sin 2\alpha}{\cos 2\alpha} \right| = \left| \frac{\frac{2\sqrt{2}}{3}}{-\frac{1}{3}} \right| = 2\sqrt{2}$$



$$\text{در بازه } [-1, 2] \quad \begin{cases} 2a+2 & -1 \leq a < 0 \\ -\frac{1}{2}a+1 & 0 \leq a \leq 2 \end{cases}$$

(10)

باید بسنجیم جدا از همی چند مورد تناوب  $(T=3)$  عدد فواصل شده در بازه  $[-1, 2]$  قرار می‌گیرد

$$\rightarrow -3 \varepsilon_{1, \omega} + 3(12) \rightarrow -3 \varepsilon_{1, \omega} + 36 = 1, 5 \checkmark \quad -\frac{1}{2} \times \frac{10}{10} + 1 \rightarrow 0, 5 \checkmark$$

در بازه است