

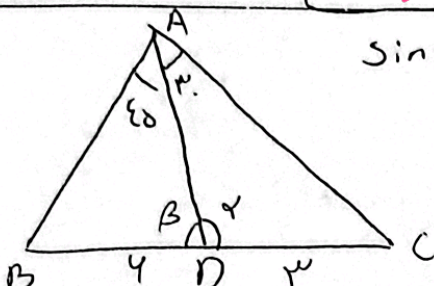
$$\tan B = \tan \beta = \cot \alpha$$

$$OA = r = 1, OT = 1$$

$$OB = \sqrt{1^2 + \cot^2 \alpha} \rightarrow OB = \frac{1}{\sin \alpha}$$

$$AB = OB - OA = \frac{1}{\sin \alpha} - 1$$

$$OB^2 = (OT)^2 + (TB)^2$$

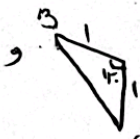
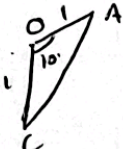
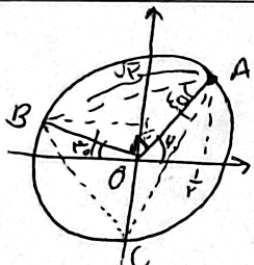


$$\sin \alpha = \sin \beta$$

$$\alpha + \beta = 110^\circ$$

$$\frac{AC}{\sin \alpha} = \frac{AB}{\sin \beta}$$

$$\frac{AB}{\sin \beta} = \frac{4\sqrt{2}}{4} \Rightarrow \frac{AB}{AC} = \sqrt{2}$$



$$AC = \sqrt{2^2 + 3^2} = \sqrt{13}$$

$$BC = \sqrt{3}$$

$$P = \frac{3\sqrt{2} + 2\sqrt{3} + \sqrt{4}}{2}$$

$$\sin A \times \frac{1}{2} \times AC \times AB = S_{\Delta}$$

$$\frac{3\sqrt{2}}{2} \times \frac{1}{2} \times \frac{\sqrt{2} + \sqrt{3}}{2} \times \sqrt{2} = \frac{3 + \sqrt{3}}{2}$$

$$2x^2 - x^2 + \sin^2(\alpha)(\cos 2\alpha) \xrightarrow{x=\cos} \cos^2 \alpha (\cos 2\alpha) + \sin^2 \alpha (\cos 2\alpha)$$

$$(\cos^2 \alpha + \sin^2 \alpha)(\cos 2\alpha)$$

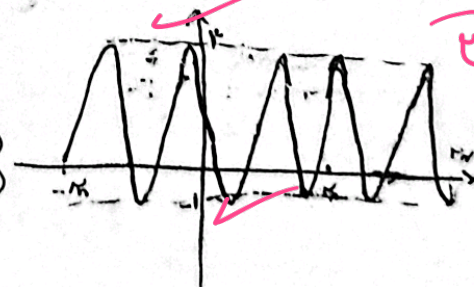
$$\cos 2\alpha = 1 \rightarrow 2\alpha = \pi \rightarrow \frac{\alpha}{2} = \frac{\pi}{2} \Rightarrow \sin 2\alpha = 0$$

مجاوبه جابجاء سوال
مناقصه يك سوال معتبر

$$-\sin 2\alpha + 1 \rightarrow T = \pi$$



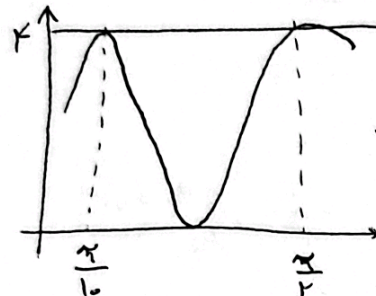
$$-2\sin \alpha x + 1 \rightarrow T = 2$$



$$f(x) = \begin{cases} \cot x & ; 0 < x < \frac{\pi}{2} \\ \sin x & ; x \leq 0 \end{cases} \rightarrow \begin{array}{c} \text{Graph of } \cot x \text{ for } 0 < x < \frac{\pi}{2} \\ \text{Graph of } \sin x \text{ for } x \leq 0 \end{array} \rightarrow \text{Range } (-1, +\infty)$$

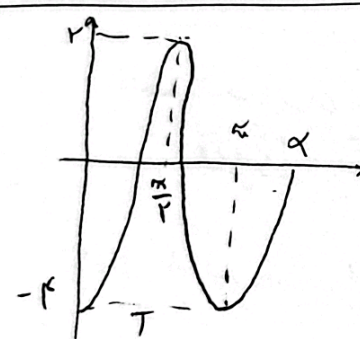
$$R_f \in [-1, +\infty)$$

$$f(x) = a + b \sin(\omega x) \cos(\omega x) \cos(\omega x) = a + \frac{b}{4} \sin(\omega x)$$



$$T = \frac{2\pi}{\omega} = \frac{\pi}{\omega} \Rightarrow \omega = 2 \Rightarrow \omega = \frac{a}{b} \Rightarrow \frac{b\omega}{a} = 2$$

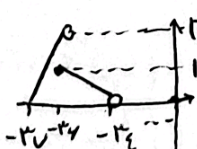
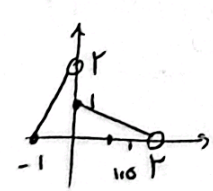
$$\frac{a}{\omega} + \frac{b}{\omega} = \frac{a}{\omega} \Rightarrow a = \omega \Rightarrow \frac{b}{\omega} = 1 \Rightarrow b = \omega$$



$$a \cos bx + c \rightarrow \begin{array}{l} |a| + c = 2 \\ -|a| + c = -2 \end{array} \Rightarrow \begin{array}{l} c = -1 \\ |a| = 3 \rightarrow a = \pm 3 \end{array}$$

$$T = \pi \rightarrow b = 2$$

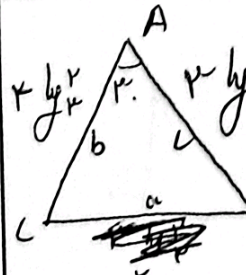
$$-3 \cos 2x - 1 = 0 \rightarrow -\frac{1}{3} = \cos 2x \Rightarrow \frac{1}{3} = |\cos 2x| \Rightarrow \frac{1}{3} = |\cos 2x|$$



با توجه به شکل عرض نقطه ۳/۵ است.
برای عرض نقطه ۱/۵ است.

$$y = -\frac{1}{5}x + 1 \rightarrow x = \frac{y}{-1/5} \Rightarrow y = \frac{1}{5}$$

$$f(1 - \frac{3}{5}, 0) = f(1, 0) = \frac{1}{5}$$



$$\frac{1}{2} \times \sin A \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{8}$$

۱.۰