

$$A / \sin \alpha \left\{ \begin{array}{l} \text{دو ضلع متساوی} \\ \text{را در مقابل است} \end{array} \right. = \frac{B}{\sin \alpha}$$

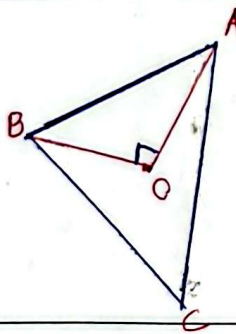
$$AB = 1 - \sin \alpha \times \frac{1}{\sin \alpha} = \frac{1}{\sin \alpha} - 1 = \frac{1 - \sin \alpha}{\sin \alpha}$$

$$AB = \sqrt{(1 - \sin \alpha)^2 + (\cot \alpha - \csc \alpha)^2} = \sqrt{(1 - \sin \alpha)^2 \left(1 + \frac{\cot^2 \alpha}{\sin^2 \alpha}\right)}$$

$$\frac{1}{x} AD \cdot AC \sin \alpha = \frac{1}{x} AD \cdot DC \sin \alpha \Rightarrow AC = 4 \sin \alpha$$

$$\frac{BD}{\sin A} = \frac{AB}{\sin B} \Rightarrow \frac{4}{\sin 60^\circ} = \frac{AB}{\sin \alpha} \Rightarrow AB = 4 \sin \alpha$$

$$\frac{AB}{AC} = \frac{4 \sin \alpha}{4 \sin \alpha} = 1$$



$$A / \frac{1}{\sqrt{2}}$$

$$B / \frac{\sqrt{2}}{2}$$

$$C / 1$$

$$AB = \sqrt{\frac{1 + \frac{1}{2}}{2} + \frac{1 + \frac{1}{2}}{2}} = \sqrt{2}$$

$$AC = \sqrt{\frac{1}{2} + \frac{1 + \frac{1}{2}}{2}} = \sqrt{2}$$

$$BC = \sqrt{\frac{1}{2} + \frac{1}{2}} = 1$$

$$\sqrt{2} + \sqrt{2} + 1$$

$$f(\cos \alpha) = 2 \cos^2 \alpha - \cos^2 \alpha - 2 \sin^2 \alpha + \sin^2 \alpha = 2(\cos^2 \alpha) - \cos^2 \alpha - 2 \sin^2 \alpha + \sin^2 \alpha$$

$$\cos^2 \alpha + \sin^2 \alpha = 1 \Rightarrow \sin^2 \alpha = 0$$

$y = -2 \sin nx + 1 \quad T = \pi$ $\varphi_n = \frac{\pi}{2}, \frac{3\pi}{2}$ $-\pi = -\frac{\pi}{2}, \frac{\pi}{2}$ بعضیہ جہوں کو ہم بدیم مٹر (کم) سہ!	$y = -\sin 2x + 2 \quad T = \pi$ (الف)	6
	$R_f = [-1, +\infty)$	7
$a + \frac{b}{c} \sin(rcx) \quad G S(rcx) = a + \frac{b}{c} \sin(rcx)$ $T = \frac{2\pi}{\omega} = \frac{2\pi}{ rc } = \frac{\pi}{ rc } \Rightarrow rc = \frac{1}{\frac{\pi}{T}} \Rightarrow c = \frac{\delta}{\pi}$ $y_{max} = a + \frac{b}{c} \Rightarrow a \leq y \leq a + \frac{b}{c} \Rightarrow \frac{b}{c} \leq y - a \leq \frac{b}{c}$ $y_{min} = a - \frac{b}{c} \Rightarrow a - \frac{b}{c} \leq y \leq a + \frac{b}{c} \Rightarrow \frac{b}{c} \leq y - a \leq \frac{b}{c}$ $\frac{1 \times \frac{b}{c}}{\pi} = \delta$	1	
$T = \pi \Rightarrow b \leq \pi$ $-a + C \leq \pi \Rightarrow C \leq -1 \Rightarrow a \leq -\pi$ $a + C \leq -\pi$ $f(x) \leq -\pi \cos \pi x - 1$ $-\pi \cos \pi x \leq 1 \Rightarrow \cos \pi x \geq -\frac{1}{\pi}$	$1 + \tan^2 x \leq \frac{1}{\cos^2 x}$ $1 + \tan^2 x \leq 9$ $\tan^2 x \leq 8$ $\tan x \leq \sqrt{8}$	9
$T = \pi \Rightarrow f(-\pi, b) = f(-\pi, b)$ $m = \pi \Rightarrow y \leq \pi + \pi \Rightarrow f(-\pi, b) \leq -1 + \pi \leq 1$		10