

$$OB^P = OT^P + BT^P$$

W, v\omega

① - 1

$$\rightarrow OB^P = 1 + \tanh B^P \rightarrow OB = \sqrt{1 + \tanh^2 B}$$

$$= \sqrt{\frac{1}{\cos^2 B}} = \frac{1}{\cos B}$$

$$\alpha + B = 90^\circ$$

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

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

(1)

(2)

مسئله ۲

$$\frac{DC}{\sin 110^\circ} = \frac{AC}{\sin \alpha}$$

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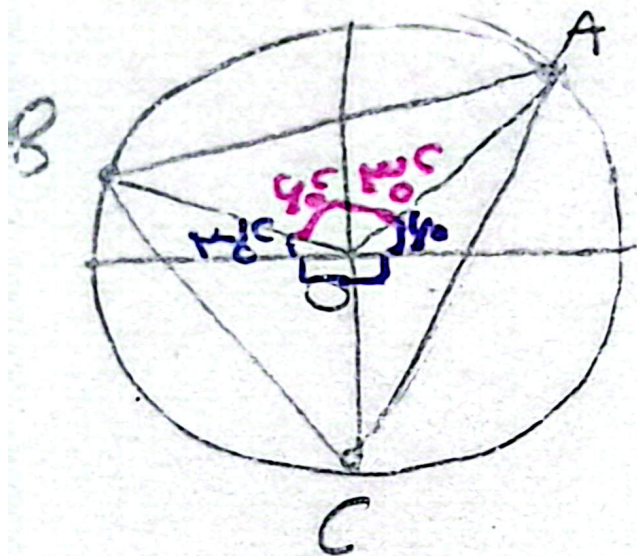
$$\frac{AC}{\sin \alpha} = 4$$

$$\frac{BD}{\sin 70^\circ} = \frac{AB}{\sin(110^\circ - \alpha)}$$
$$\sin \alpha$$

→

$$\frac{AB}{\sin \alpha} = 4\sqrt{2}$$

$$\rightarrow \frac{AB}{AC} = \sqrt{2}$$



① - 12

$$\cos \hat{A} = \frac{1}{\sqrt{2}} \rightarrow \hat{A} = 45^\circ$$

$$\sin \hat{B} = \frac{1}{\sqrt{2}} \rightarrow \hat{B} = 100^\circ$$

$$S_{\triangle OAB} = \frac{1}{2} \times OA \times OB = \frac{1}{2} \times 1 \times 1 = \frac{1}{2}$$

$$S_{\triangle OBC} = \frac{1}{2} \times OB \times OC \sin 100^\circ = \frac{1}{2} \times 1 \times 1 \times \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{4}$$

$$S_{\triangle OAC} = \frac{1}{2} \times OA \times OC \sin 100^\circ = \frac{1}{2} \times 1 \times 1 \times \frac{1}{2} = \frac{1}{4}$$

$$S_{\triangle ABC} = \frac{1}{2} + \frac{1}{4} + \frac{\sqrt{2}}{4} = \frac{2 + \sqrt{2}}{4}$$

$$S_{ABC} = \frac{1}{\mu} AC AB \sin \angle C$$

$$S_{ABC} = \frac{1}{\mu} \log_{\mu} 14 \log_{\mu} \mu^{\mu} \times \frac{1}{\mu} - \mu$$

$$= \frac{1}{\mu} \times \frac{\log 14}{\log \mu} \times \frac{\log \mu^{\mu}}{\log \mu} \times \frac{1}{\mu}$$

$$= \frac{1}{\mu} \times \frac{\cancel{\mu} \log \mu}{\log \mu} \times \frac{\mu \log \mu}{\log \mu} \times \frac{1}{\mu} = \mu$$

$$n = \cos \alpha$$

$$P \cos^N \alpha - \cos^N \alpha - \sin^N \alpha (P \sin^N \alpha - 1)$$

$$= \cos^N \alpha (\underbrace{P \cos^N \alpha - 1}_{\cos^N \alpha}) - \sin^N \alpha (\underbrace{P \sin^N \alpha - 1}_{-\cos^N \alpha})$$

$$\cos^N \alpha (\cos^N \alpha + \sin^N \alpha) = \cos^N \alpha$$

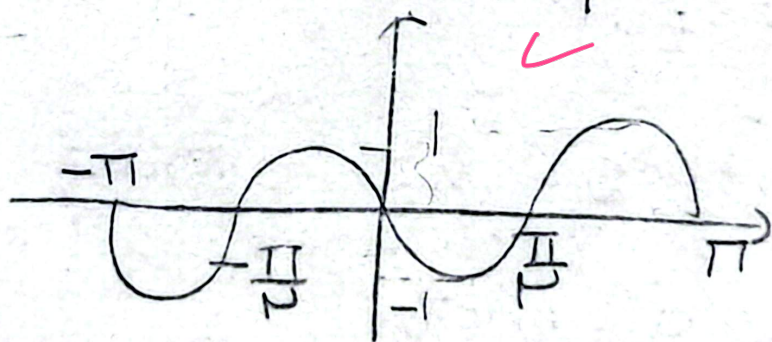
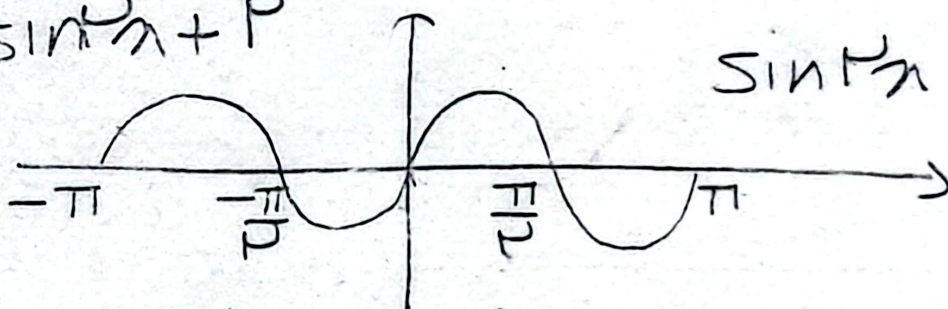
$$\rightarrow \cos^N \alpha = 1 \rightarrow \sin^N \alpha = 0$$

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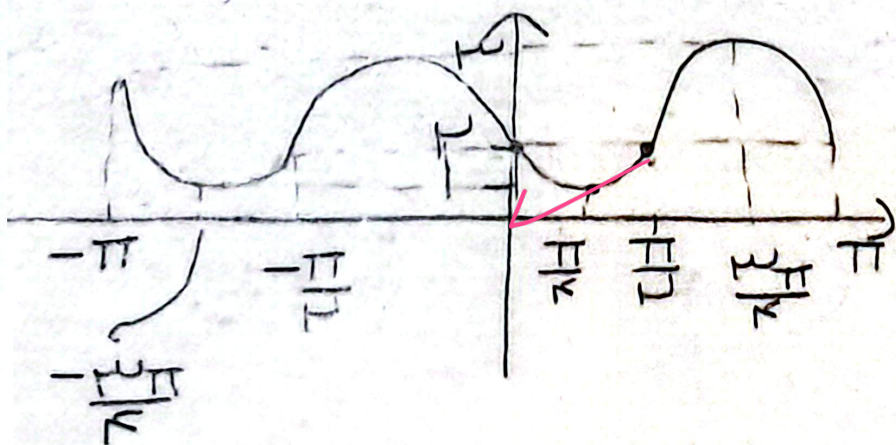
$$y = -P \sin \lambda \cos \lambda + P$$

$$T = \frac{2\pi}{P} = \pi$$

$$= -\sin 2\lambda + P$$



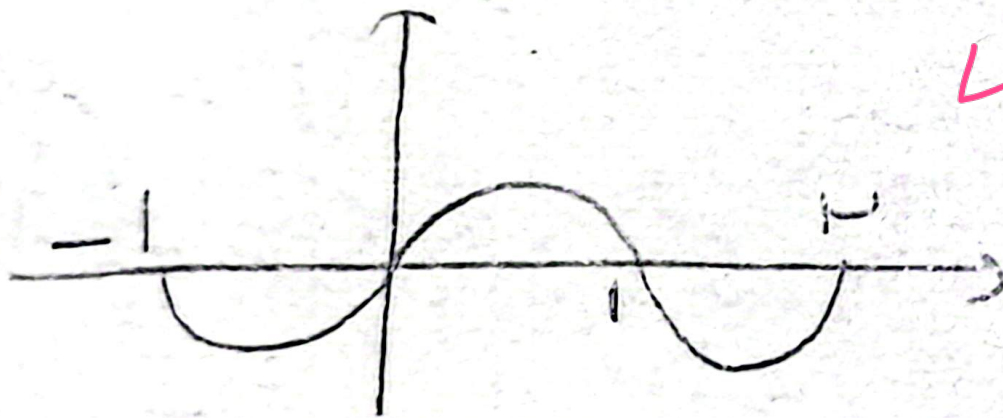
$$-\sin 2\lambda$$



$$-\sin 2\lambda + P$$

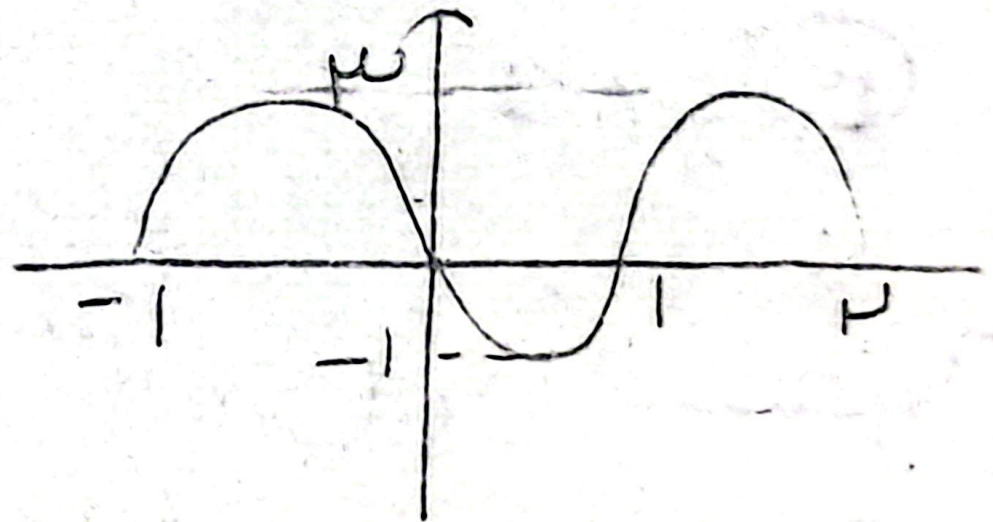
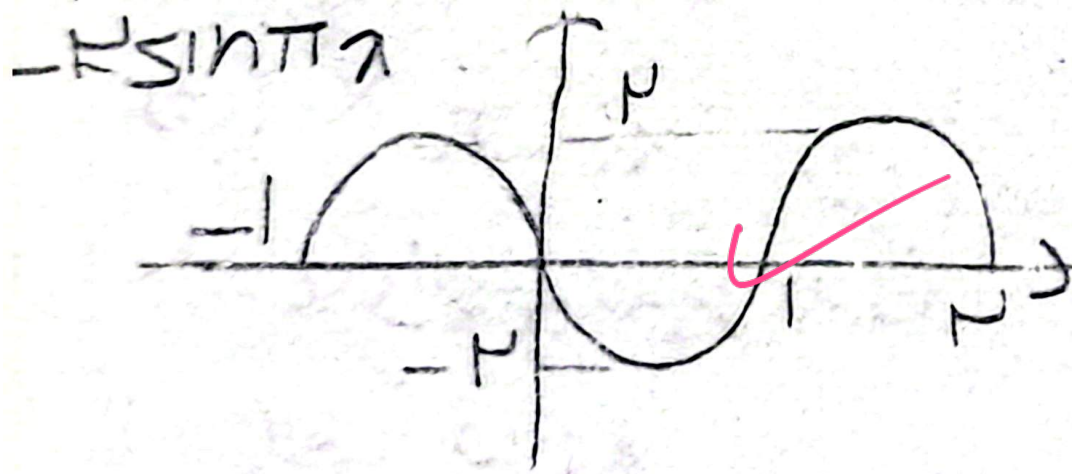
$$c) \mu \cos\left(\frac{\pi}{\mu} + \pi x\right) + 1$$

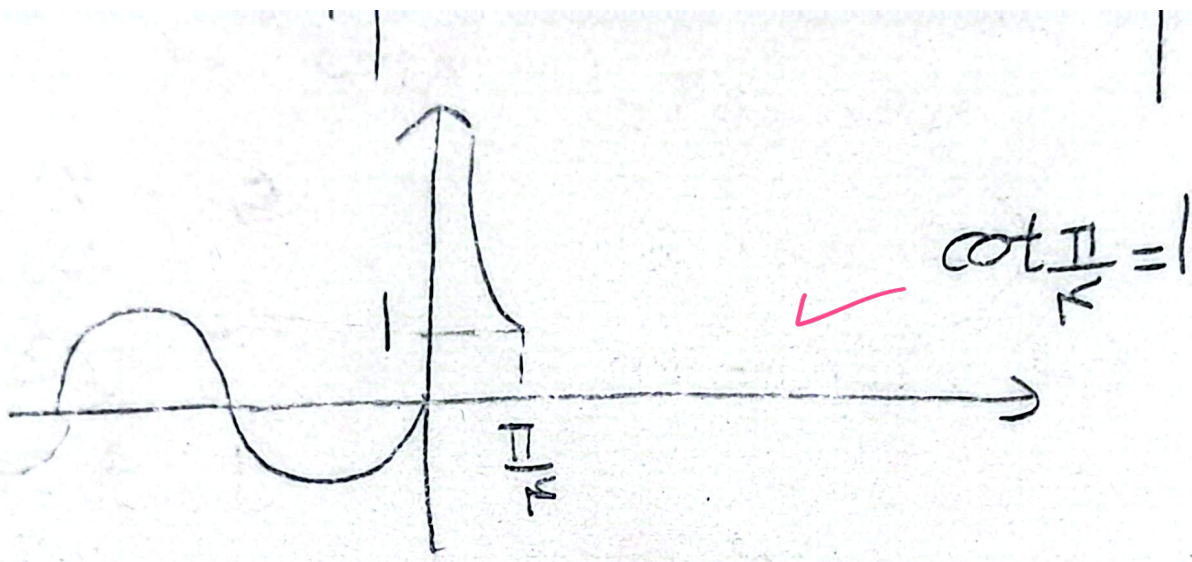
$$= -\mu \sin \pi x + 1 \quad T = \frac{\mu \pi}{\pi} = \mu$$



$\sin \pi x$

$-\mu \sin \pi x + 1$





- v

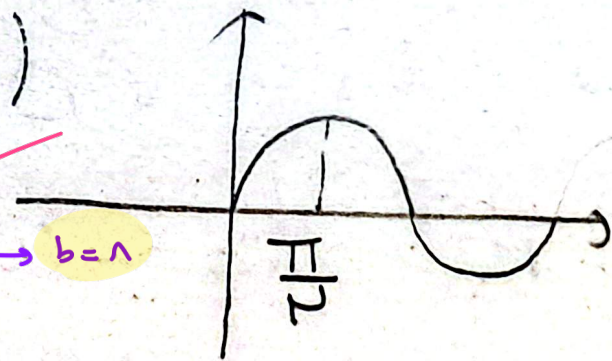
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بر =  $[-1 + \infty)$

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1, 100  
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$a + \frac{b}{\mu} \sin(\mu x) \cos(\mu x)$

$= a + b \sin(\mu x)$



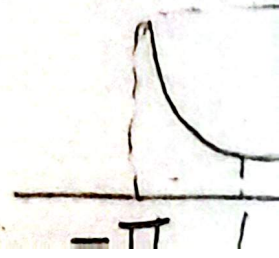
$\int a + \frac{b}{\mu} = \mu$

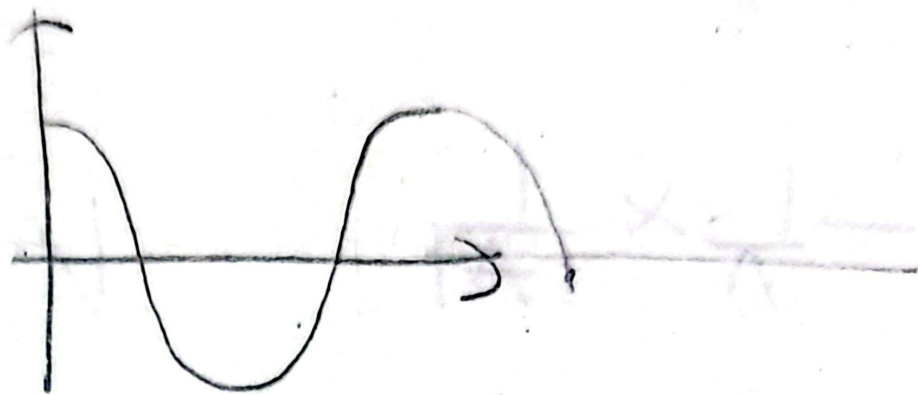
$a - \frac{b}{\mu} = 0 \rightarrow a = \mu, \frac{b}{\mu} = \mu \rightarrow b = \mu$

$T = \frac{\mu \pi}{\mu C} = \frac{\pi}{\mu C} = \frac{\mu \pi}{10} \rightarrow C = \frac{3\mu}{\pi}$

$\frac{b}{\mu} = \mu \rightarrow b = \mu, a = \mu$

$\frac{\mu \times \frac{3\mu}{\pi}}{2} = \frac{3\mu}{2} \rightarrow \frac{\mu \times \frac{3\mu}{\pi}}{2} = \frac{3\mu}{2}$





①

$$a < 0 \quad T = \pi \rightarrow \frac{\pi}{b} = \pi$$

$$x = \pi + \frac{T}{\kappa} = \frac{\omega \pi}{\kappa}$$

$$\Rightarrow b = \kappa$$

$$|a| + c = \kappa$$

$$\omega \quad -|a| + c = -\kappa \Rightarrow$$

$$\begin{cases} c = -1 \\ a = -\kappa \end{cases}$$

$$\frac{1}{\kappa} \times \frac{1}{\omega} \tan \frac{\omega \pi}{\kappa} = \left| \tan \frac{\pi}{\kappa} \right| =$$

$\kappa$

①

$$\mu \cdot \mu_s \cdot \omega \quad -\mu \leq \omega = \underbrace{-1 \times \mu + 1}_{\text{سی تاثیر}} \cdot \omega$$

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$$f(-\mu \leq \omega) = f(1 \cdot \omega)$$

$$0 \leq n < \mu \rightarrow f(n) = -\frac{1}{\mu}n + 1$$

$$f\left(\frac{\mu}{\mu}\right) = -\frac{\mu}{\mu} + 1 = \cancel{\frac{1}{\mu}}$$

A

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$$BC^2 = 1^2 + 1^2 - 1 \times 1 \times 2 \times \frac{1}{2} = 1 + 1 + 1 = 3 \rightarrow BC = \sqrt{3}$$

$$AC^2 = 1^2 + 1^2 - 1 \times 1 \times 2 \times \frac{\sqrt{3}}{2} = 1 + 1 + \sqrt{3} \rightarrow AC = \sqrt{2 + \sqrt{3}}$$

$$AB^2 = 1^2 + 1^2 \rightarrow AB = \sqrt{2}$$

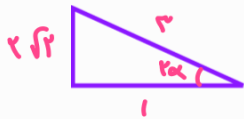
$$P_{ABC} = \sqrt{2} + \sqrt{3} + \sqrt{2 + \sqrt{3}}$$

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$$\frac{2\pi}{|h|} = 2 \rightarrow h = \pm 2 \quad \text{صفتی ریشه بودن معلوم نیست} \rightarrow h = 2$$

$$\begin{aligned} \phi(1) < -2, \quad \phi\left(\frac{\pi}{2}\right) < -2 &\rightarrow \begin{aligned} a + c &< -2 \\ -a + c &< 2 \end{aligned} \rightarrow \begin{aligned} c &= -1 \\ a &= -2 \end{aligned} \end{aligned}$$

$$\phi(x) < 0 \rightarrow -2c \cdot \sin x - 1 < 0 \rightarrow c \cdot \sin x = -\frac{1}{2}$$



$$\rightarrow |\tan x| = 2\sqrt{2}$$