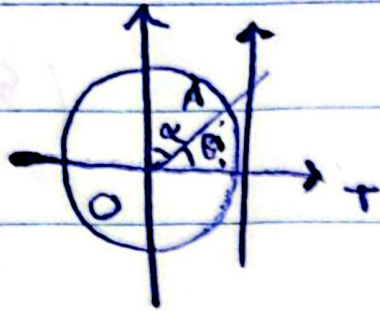




$$TB = \tan \beta = \cot \alpha$$

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

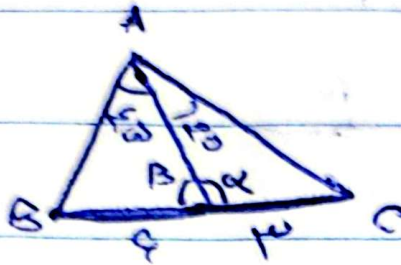
(1)

$$OB^2 = (OT)^2 + (TB)^2 \Rightarrow OB = \sqrt{1 + \cot^2 \alpha}$$

(2)

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

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



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

$$\alpha + \beta = 180^\circ$$

(3)

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

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

(4)

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

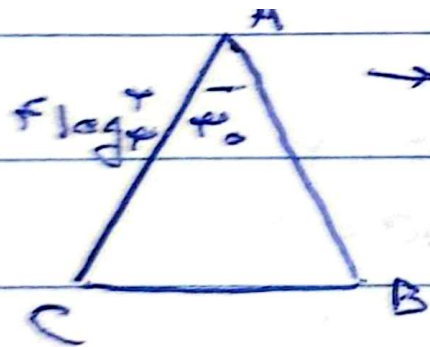
$$BC = \sqrt{2}$$

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

(5)

$$\sin A \times \frac{1}{2} \times AC \times AB \Rightarrow \frac{\sqrt{2}}{2} \times \frac{1}{2} \times \frac{\sqrt{2} + \sqrt{2}}{2} \times \sqrt{2} = \frac{2 + \sqrt{2}}{2}$$

(6)



$$\rightarrow \log \frac{r}{r_0} = t$$

$$CB = \sqrt{19 + r^2 c^2 - \sqrt{r^2 c^2}}$$

1 (K)

$$\Rightarrow \frac{1}{t^2} = 19 + t^2 - \sqrt{r^2 c^2} \Rightarrow a^2 = b^2 + c^2 - 2bc \cos A$$

$$\Rightarrow c = b \sqrt{r^2} + \sqrt{r^2 c^2 - b^2}$$



$$S = \sin A \times \frac{1}{r} \times \frac{1}{r} \times C = \frac{bc}{r}$$

$$\frac{r \sqrt{r^2} + \sqrt{r^2 c^2 - 19t}}{r}$$

$$S = r \sqrt{r^2} (\log \frac{r}{r_0})^2 + \sqrt{9 - r^2 (\log \frac{r}{r_0})^2}$$

صورت سوال K تغییر کرده بود...

$$S_{ABC} = \frac{1}{r} \times \sin \frac{\pi}{4} \times 10g \frac{r}{r_0} \times 10g \frac{r}{r_0}$$

$$\frac{1}{r} \times \frac{1}{r} \times \cancel{10g \frac{r}{r_0}} \times \cancel{10g \frac{r}{r_0}} = 3 \quad (3)$$

$$Y X^T = X^T + \sin^T(\alpha) (\cos^T \alpha) \Rightarrow \cos^T \alpha (\cos^T \alpha) + \sin^T \alpha (\cos^T \alpha) \quad (1)$$

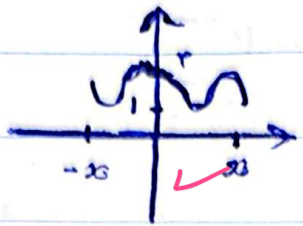
$$\cos^T \alpha = 1 \Rightarrow Y X = X \Rightarrow \frac{X}{Y} = X \Rightarrow \sin^T \alpha = 0$$

A

2

نسل‌ها را بنویسید

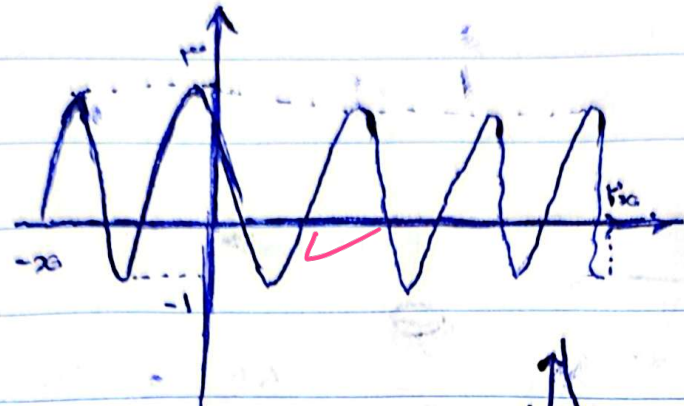
الف) $T = \pi$



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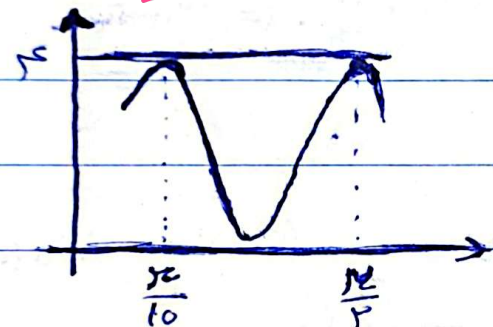
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ب) $T = \pi$



$$g(x) \begin{cases} \cos x : 0 < x < \frac{\pi}{2} \\ \sin x : x < 0 \end{cases} \Rightarrow \begin{matrix} \text{Graph 1} \\ \text{Graph 2} \end{matrix} \begin{matrix} R \in (1, +\infty) \\ R \in [1, 2] \end{matrix}$$

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



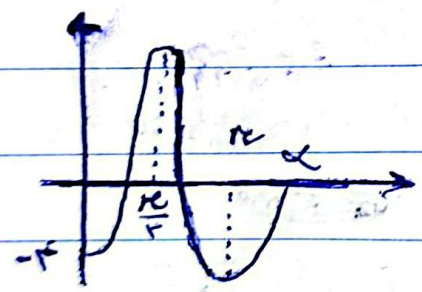
$$a + \frac{b}{\pi} \sin(\pi C R)$$

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$$T = \frac{2\pi}{|fC|} = \frac{\pi}{\omega} \Rightarrow fC = \omega \Rightarrow C = \frac{\omega}{f}$$

$$\frac{bC}{\omega} = \omega$$

$$\begin{cases} a + \frac{b}{\pi} = \pi \\ a + \frac{b}{\pi} = 0 \end{cases} \Rightarrow \begin{matrix} a = \pi \\ b = -\pi \end{matrix}$$



$$T = \pi \Rightarrow b = \pi$$

$$|a| + c = \pi$$

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$$-|a| + c = -\pi$$

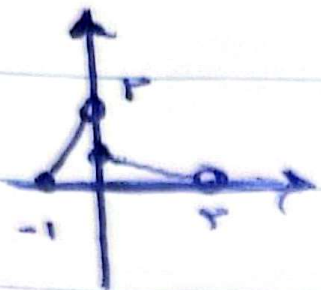
$$c = -1$$

$$|a| = \pi \Rightarrow a = \pm \pi$$

$$-\pi \cos \pi x - 1 = 0 \Rightarrow \frac{1}{\pi} = \cos \pi x$$

$$|b \sin \pi x| = \pi$$



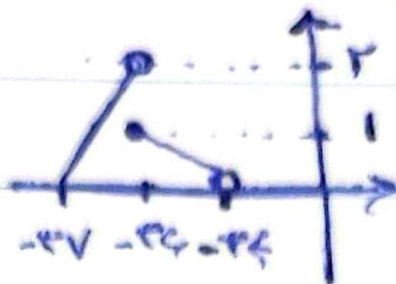


$$y = -\frac{1}{2}x + 1 \Rightarrow x = 2$$

$$y = \frac{1}{2}$$

$$g(-1, 2) = \frac{1}{2}$$

(10



2