

Subject:

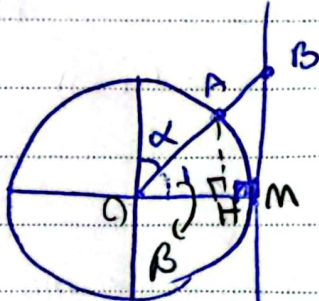
تفاضل و تكامل

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Day:

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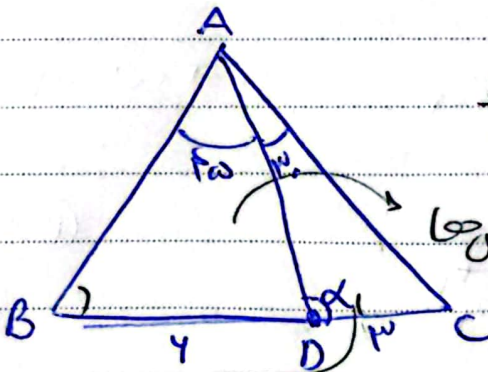


$$AH \parallel BM \rightarrow \frac{OA}{OB} = \frac{OM}{OA} \quad \frac{OM=1}{OA=1}$$

$$y = \tan \alpha \rightarrow OB = \frac{1}{\cos \beta}$$

$$OB = \frac{1}{\cos \beta} \quad \alpha + \beta = 90^\circ \rightarrow \cos \beta = \sin \alpha \rightarrow OB = \frac{1}{\sin \alpha}$$

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



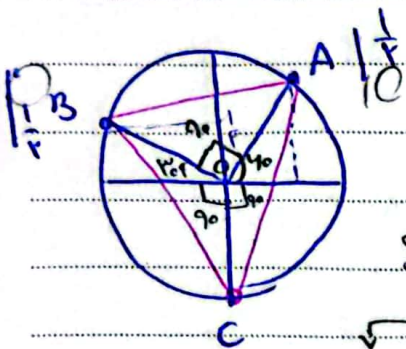
$$\frac{AB}{AC} = ?$$

$$\cos \beta = \frac{AD}{AB} \Rightarrow \frac{y}{AB} = \frac{AD}{y} = \frac{AD}{y \sin \beta} \Rightarrow AB = \frac{y}{\sin \beta}$$

$$\frac{y}{\sin \beta} = y = \frac{AD}{\sin \gamma} \rightarrow AD = y \sin \gamma$$

$$\textcircled{1} \textcircled{2} \Rightarrow y \sin \gamma = y \sqrt{r} \sin \beta \rightarrow \sin \gamma = \sqrt{r} \sin \beta$$

$$\frac{AB}{AC} \rightarrow \frac{AB}{\frac{y}{\sin \beta}} = \frac{AC}{y \sin \gamma} \rightarrow AB = \sqrt{r} AC \Rightarrow \frac{AB}{AC} = (\sqrt{r})$$



$$\cos A = \frac{1}{2} \rightarrow A = 60^\circ$$

$$\sin B = \frac{1}{2} \rightarrow B = 120^\circ$$

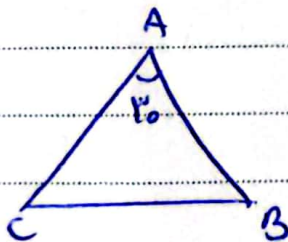
$$S_{ABC} = S_{AOC} + S_{BOA} + S_{BOC}$$

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

$$AB^2 = 1 + 1 - 2(1)(1)\cos(120^\circ) = 3 \rightarrow AB = \sqrt{3}$$

$$BC^2 = 1 + 1 - 2(1)(1)\cos(40^\circ) = 2 - 2\cos(40^\circ) \rightarrow BC = \sqrt{2 - 2\cos(40^\circ)}$$

$$AC^2 = 1 + 1 - 2(1)(1)\cos(80^\circ) = 2 - 2\cos(80^\circ) \rightarrow AC = \sqrt{2 - 2\cos(80^\circ)}$$



$$AC = \log_{1/2} 1 \quad AB = \log_{1/2} 1$$

$$S_{ABC} = \frac{1}{2} AC \times BC \times \sin 120^\circ$$

$$\frac{1}{2} \times \log_{1/2} 1 \times \log_{1/2} 1 = \frac{1}{2} \times \log_{1/2} 1 \times \log_{1/2} 1 = \frac{1}{2} \times 0 \times 0 = 0$$

$$m \cos \alpha = 1 \rightarrow m = \frac{1}{\cos \alpha}$$

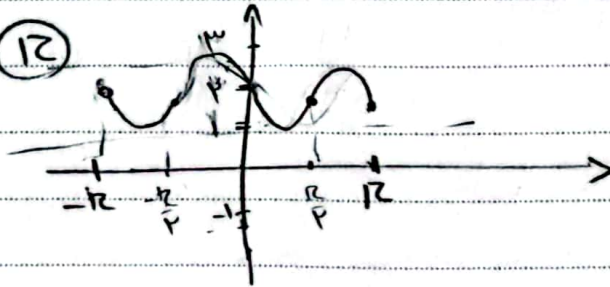
$$\cos \alpha (\cos \alpha + \sin \alpha) = 1 \rightarrow \cos \alpha = 1 \rightarrow \sin \alpha = 0$$

(4)

$$\text{cell } y = -P \sin n \cos n + P \quad [-R, R]$$

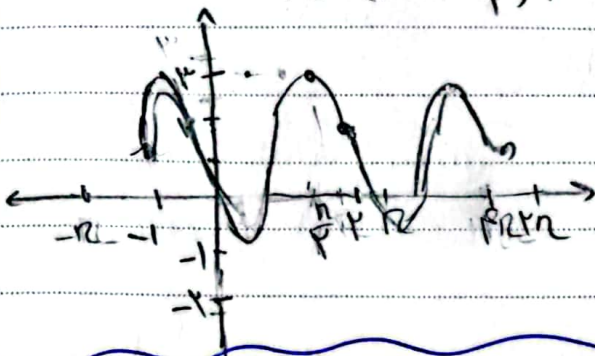
$$\hookrightarrow P \sin n \cos n = \sin n \Rightarrow \sin n + P = y$$

$$T = \frac{PR}{|b|} \rightarrow \frac{PR}{P} = R$$



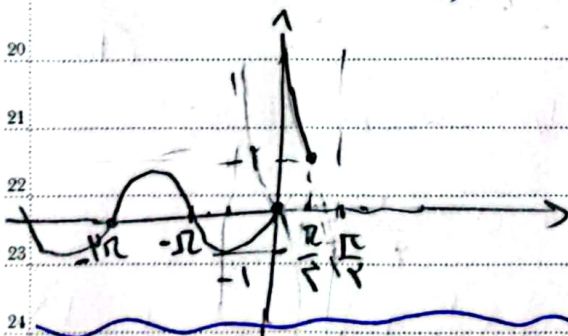
$$\hookrightarrow y = P \cos(n + \frac{1}{P})R + 1 \quad [-R, R]$$

$$\hookrightarrow P \cos(Rn + \frac{R}{P}) + 1 \quad T = \frac{PR}{b} = \frac{PR}{R} = P$$



(5)

$$f(n) = \begin{cases} \cos n & ; 0 < n < \frac{\pi}{2} \\ \sin n & ; n \leq 0 \end{cases}$$



$$R_{f(n)} = [-1, +\infty)$$

$$f(n) = a + b \sin(n) \cos(n) \cos(n) \quad \frac{1}{P} \sin(n) \quad \text{(1)}$$

$$\hookrightarrow a + \frac{b}{P} \sin(n) \cos(n)$$

$$\hookrightarrow a + \frac{b}{P} \sin(n)$$

Arman

ادام سوال 8

$$y = a + \frac{b}{x} \sin(x \text{ cm})$$

نقطه اول و دوم $a = 2$
 عرض نقطه اول و دوم $b = 1$

$$T = \frac{0.2R}{\omega} - \frac{12}{10} = \frac{FR}{10} = \frac{PR}{\omega}$$

$$\frac{PR}{0} = \frac{12}{\omega} \rightarrow 0 = \omega \rightarrow FC = \omega \rightarrow \omega = \frac{12}{8}$$

$$\frac{bc}{a} \rightarrow \frac{A \omega}{R} = \omega$$

$$F(x) = a \cosh x + c \quad | \text{temp} |$$

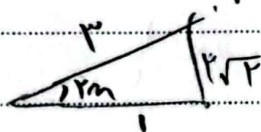
9

$$T = R \rightarrow \frac{PR}{|b|} = R \rightarrow b = 2$$

نقطه اول و دوم $c = -1$
 عرض نقطه اول و دوم $|a| = 3 \rightarrow a = -3$

$$y = 3 \cosh x - 1 = 0 \rightarrow \cosh x = \frac{1}{3} \quad \sinh x = \frac{\sqrt{2}}{3}$$

$$\tanh x = \frac{\sinh x}{\cosh x} = \frac{\sqrt{2}}{2}$$



$$F(-3, \omega) = (-3 - \frac{1}{\omega}) + 3 = \frac{1}{\omega}$$

نقطه اول و دوم

$$y = -\frac{1}{x} + 1 \rightarrow -\frac{1}{x} \times \frac{1}{2} + \frac{1}{2} = -\frac{1}{2} + \frac{1}{2} = 0$$