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برنامه مقیم

$$\Lambda \cos 2\pi - \tan^2 \pi = 1 \Rightarrow \Lambda \cos \pi - \frac{\sin^2 \pi}{\cos^2 \pi} = 1$$

$$\Lambda (\cos^2 \pi - \sin^2 \pi) = \cos^2 \pi \Rightarrow \frac{\Lambda (\cos^2 \pi - \sin^2 \pi)}{\cos^2 \pi} = 1$$

منوع مطلق

$$\sin^2 \pi = 1 - \cos^2 \pi \Rightarrow \Lambda (\cos^2 \pi - 1 + \cos^2 \pi) = \cos^2 \pi \Rightarrow \Lambda (2\cos^2 \pi - 1) = \cos^2 \pi$$

$$\cos^2 \pi = \frac{1}{\Lambda}$$

جواب 2

$$\Delta \sin^2 \pi + \gamma (\cos^2 \pi) = -\gamma \Rightarrow \Delta \sin^2 \pi + \gamma (1 + \cos^2 \pi) = 0$$

$$\Rightarrow \Delta \sin^2 \pi = 0 \Rightarrow \sin^2 \pi = 0$$

ن = kπ = -π, 0, π

$$\Rightarrow \gamma (\cos^2 \frac{\pi m}{\gamma}) = 0 \Rightarrow \cos^2 \frac{\pi m}{\gamma} = 0 \Rightarrow \frac{\pi m}{\gamma} = k\pi + \frac{\pi}{2} \Rightarrow m = \frac{\gamma k\pi}{\pi} + \frac{\gamma}{2} = \gamma k + \frac{\gamma}{2}$$

جواب 2 ~ -π, π ~ 1

$$\gamma \sin(\pi) (\cos(\gamma m)) + \sin(\pi) = 1 \Rightarrow \gamma \sin \pi - \gamma \sin^2 \pi = 1 \Rightarrow \sin^2 \pi = 1$$

$$\Rightarrow \gamma m = \gamma (k\pi + \frac{\pi}{2}) \Rightarrow m = \frac{\gamma k\pi}{\gamma} + \frac{\pi}{2} = k\pi + \frac{\pi}{2}$$

ن = π/2, 3π/2, 5π/2, 7π/2

⊕

$$\frac{1}{\sin(\frac{\pi}{\gamma} + \gamma m)} + \frac{1}{\cos(\frac{\pi}{\gamma} + \gamma m)} = 0 \Rightarrow \frac{1}{\cos \gamma m} + \frac{1}{-\sin \gamma m} = 0$$

$$\cos \gamma m = \gamma \sin \gamma m \Rightarrow \cos \gamma m = \sin \gamma m \Rightarrow \frac{1}{\cos \gamma m} = \frac{1}{\sin \gamma m}$$

cos γm ≠ 0, sin γm = 1/γ

30°, 150° ⇒ m = 10, 150 ⇒ γ = 10, 150

γ = 10

$$\star \Rightarrow \tan \gamma = \tan(30 + 150) = -\sqrt{3}$$

$$m (\cos \pi - \sin \pi) - \gamma \sqrt{3} \sin(\gamma m) = \sqrt{3}$$

$$m \sqrt{3} - \gamma \sqrt{3} (\gamma \frac{1}{\gamma}) = \sqrt{3}$$

$$\frac{m\sqrt{3}}{\gamma} - \sqrt{3} = \sqrt{3} \Rightarrow m = 4$$

روز بزرگداشت مولوی

$$\frac{\sqrt{3}}{\gamma} (\cos m - \sin m) = \frac{1}{\sqrt{3}}$$

$$\cos m - \sin m = \frac{\gamma}{\sqrt{3}}$$

cos γ + sin γ = γ

1/γ = sin m cos m

$$\sin\left(m + \frac{\pi}{4}\right) \cos\left(m - \frac{\pi}{4}\right) = 1 \rightarrow \cos\left(\frac{\pi}{4} - \left(m + \frac{\pi}{4}\right)\right) \times \cos\left(m - \frac{\pi}{4}\right) = 1$$

$$\Rightarrow \cos\left(\frac{\pi}{4} - m\right) \cos\left(m - \frac{\pi}{4}\right) = 1 \rightarrow \cos^2\left(m - \frac{\pi}{4}\right) = 1 \rightarrow \cos\left(m - \frac{\pi}{4}\right) = \pm 1$$

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روشنه

30 Sep. 2024

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ربیع الاول

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$$\cos\left(m - \frac{\pi}{4}\right) = 1 \rightarrow m - \frac{\pi}{4} = 2k\pi \rightarrow m = 2k\pi + \frac{\pi}{4}$$

$$\cos\left(m - \frac{\pi}{4}\right) = -1 \rightarrow m - \frac{\pi}{4} = 2(k\pi + \pi) \rightarrow m = 2k\pi + \frac{9\pi}{4}$$

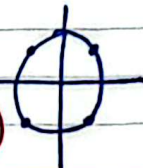
جواب ۲

$$\sin m + \sqrt{2} \cos m = \sqrt{2} \quad \text{ضرب کنیم} \quad \sin^2 m + 2 \cos^2 m = 2 \Rightarrow \cos^2 m = 1$$

$$\text{باز} \Rightarrow [-\pi/2, \pi/2]$$

$$\frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$$

$$\Rightarrow \frac{2}{\sqrt{2}\pi}$$

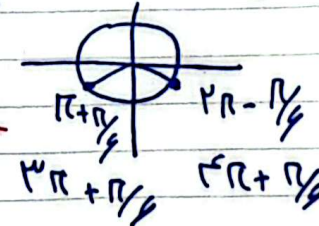


$$\cos m = \pm \frac{1}{\sqrt{2}}$$

$$\sin m \sin\left(\frac{3\pi}{4} - m\right) = 1 \rightarrow \sin m \cos m - \cos m = 1 \Rightarrow \sin m \cos m = \frac{1}{2}$$

$$\Rightarrow \frac{\sin 2m}{2} = \frac{1}{2} \Rightarrow \sin 2m = 1$$

$$\text{باز: } 2m = \frac{\pi}{2} \Rightarrow m = \frac{\pi}{4}$$



$$(1 + \cos 2\alpha)(1 + \cos 4\alpha)(1 + \cos 8\alpha) = \frac{1}{4} \rightarrow \cos^2 \alpha \times \cos^2 2\alpha \times \cos^2 4\alpha = \frac{1}{4}$$

$$+ \frac{1}{4} \sin \alpha = \frac{1}{4} \sin 4\alpha \cos^2 \alpha = \sin \alpha \cos \alpha \cos^2 2\alpha \cos^2 4\alpha$$

$$\sin 8\alpha = \pm \sin \alpha \rightarrow \begin{cases} 8\alpha = 2k\pi + \alpha \rightarrow \alpha = \frac{7\pi}{7} \\ 8\alpha = 2k\pi - \alpha \rightarrow \alpha = \frac{2\pi}{7} \end{cases}$$

$$\sin 8\alpha = -\sin \alpha \rightarrow \begin{cases} 8\alpha = 2k\pi - \alpha \rightarrow \alpha = \frac{7\pi}{9} \\ 8\alpha = 2k\pi + \pi - \alpha \rightarrow \alpha = \frac{2\pi}{9} + \frac{\pi}{8} \end{cases}$$

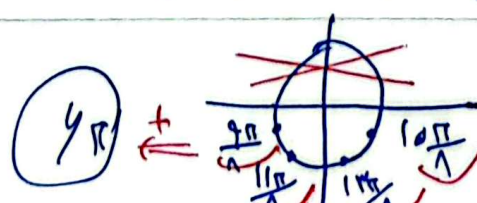
$$M_{\alpha} = \frac{1}{\alpha}$$

$$\tan(m) \tan(n) = 1 \Rightarrow \tan(m) = \frac{1}{\tan(n)} = \cot n$$

$$m = k\pi + \frac{\pi}{4} - n$$

$$m = k\pi + \frac{\pi}{4} \rightarrow m = \frac{k\pi}{2} + \frac{\pi}{4}$$

روز هفستکی و همدردی با کودکان و نوجوانان فلسطینی



رابطه [pi/4, pi/2]