

نام و نام خانوادگی: کوروش شیرازی فر پاسخنامه تشریحی تکلیف شماره ۱۷ کلاس دوازدهم A

~~۱۸/۱۷۵~~
 $\Lambda \cos x = \frac{1 + \tan^2 x}{\cos^2 x} \Rightarrow \Lambda \cos x = \frac{1}{\cos^2 x} \rightarrow \Lambda \cos x - \frac{1}{\cos^2 x} = 0$
 $\times \cos^2 x \rightarrow \Lambda \cos^3 x - 1 = 0 \Rightarrow (\cos x - 1)(\cos^2 x + \cos x + 1) = 0$
 $\Delta < 0$ ریشه ندارد
 $\cos x - 1 = 0 \Rightarrow \cos x = 1 \rightarrow$  جواب
 (۲) ✓

$\omega \sin^2 x + \gamma \cos^2 x = -\gamma \Rightarrow \omega (1 - \cos^2 x) + \gamma (\cos^2 x - 1) = -\gamma$
 $\Rightarrow \Lambda \cos^3 x - \omega \cos^2 x - \gamma \cos x + \gamma = 0$ امتحان کرد
 $\cos x = -1$ (۱, ۷۵) $\Delta < 0$
 $\Rightarrow \cos x = -1 \Rightarrow x = \pi + 2k\pi$ جواب
 (۲) ✓

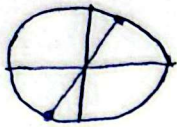
$\gamma \sin x \cos x + \sin x = 1 \Rightarrow \sin x (\gamma \cos x + 1) = 1$
 $\Rightarrow \sin x (3 - \sin^2 x) = 1 \Rightarrow \sin^3 x - 3 \sin x + 1 = 0$
 $\sin x = \frac{1}{\gamma} \Rightarrow x = \frac{\pi}{6} \text{ و } \frac{5\pi}{6}$
 $\sin x = -1 \Rightarrow x = \frac{3\pi}{2}$
 جمع: $\frac{\pi}{6} = \frac{\pi}{\gamma}$
 (۲) ✓

$\frac{1}{\sin(\frac{\pi}{2} + \frac{\pi}{4})} + \frac{1}{\cos(\frac{\pi}{2} + \frac{\pi}{4})} = \frac{1}{\cos x} - \frac{1}{\sin x} \Rightarrow \frac{\sin x + \cos x}{-\cos x \sin x} = 0$
 $\Rightarrow \frac{-\gamma \sin^2 x \cos x + \cos^2 x}{-\cos^2 x \sin x} = \frac{\cos^2 x (-\gamma \sin^2 x + 1)}{-\cos^2 x \sin x} = 0 \Rightarrow -\gamma \sin^2 x + 1 = 0$
 $\Rightarrow \sin^2 x = \frac{1}{\gamma} \Rightarrow \sin x = \pm \frac{1}{\sqrt{\gamma}}$
 $\Rightarrow x = \frac{\pi}{4} \text{ و } \frac{3\pi}{4} \text{ و } \frac{5\pi}{4} \text{ و } \frac{7\pi}{4}$
 (۲) ✓

$\cos x - \sin x = -(\sin x - \cos x) = \sqrt{2} \sin(-x + \frac{\pi}{4}) \Rightarrow$
 $\sin(\frac{\pi}{4} + x) = \sin(\frac{\pi}{4} - x) = \sin(-x + \frac{\pi}{4}) \Rightarrow \cos x - \sin x = \sqrt{2} \sin(-x + \frac{\pi}{4})$
 $\frac{\pi}{4} + x = y \Rightarrow x = y - \frac{\pi}{4} \Rightarrow \sin 2x = \sin(2y - \frac{\pi}{2}) = -\cos 2y$
 $\sin(2x) = \frac{1}{\gamma} \Rightarrow m\sqrt{\frac{\gamma}{\mu}} - \gamma\sqrt{\frac{\gamma}{\mu}} \times \frac{1}{\mu} = \sqrt{\gamma} \Rightarrow m\sqrt{\frac{\gamma}{\mu}} - \sqrt{\gamma} = \sqrt{\gamma}$
 $\Rightarrow m = \frac{\sqrt{\gamma}}{\sqrt{\frac{\gamma}{\mu}}} \Rightarrow m = \sqrt{\gamma} \times \sqrt{\frac{\mu}{\gamma}} = \sqrt{\mu} = \sqrt{9} = 3$
 (۲) ✓

$$\sin\left(\pi + \frac{\pi}{\epsilon}\right) = \cos\left(-\frac{\pi}{\epsilon} + \pi + \frac{\pi}{\epsilon}\right) = \cos\left(\pi - \frac{\pi}{\epsilon}\right) \Rightarrow \cos\left(\pi - \frac{\pi}{\epsilon}\right)^2 = 1$$

$$\Rightarrow \cos\left(\pi - \frac{\pi}{\epsilon}\right) = \pm 1 \Rightarrow \pi - \frac{\pi}{\epsilon} = k\pi \Rightarrow \pi = k\pi + \frac{\pi}{\epsilon}$$



جواب

✓

$$\sin \pi + \sqrt{\pi} \cos \pi = \sqrt{\pi} \Rightarrow \sin \pi + \sqrt{\pi} \cos \pi = \sqrt{\pi} \sin\left(\pi + \frac{\pi}{\sqrt{\pi}}\right) \Rightarrow \tan \alpha = \sqrt{\pi} \Rightarrow \alpha = \frac{\pi}{\sqrt{\pi}}$$

$$\Rightarrow \sqrt{\pi} \sin\left(\pi + \frac{\pi}{\sqrt{\pi}}\right) = \sqrt{\pi} \Rightarrow \sin\left(\pi + \frac{\pi}{\sqrt{\pi}}\right) = \frac{\sqrt{\pi}}{\sqrt{\pi}} \Rightarrow \pi + \frac{\pi}{\sqrt{\pi}} = \pi k\pi + \frac{\pi}{\sqrt{\pi}}$$

$$\pi + \frac{\pi}{\sqrt{\pi}} = \pi k\pi + \frac{\pi}{\sqrt{\pi}} \Rightarrow \pi = \pi k\pi \rightarrow \begin{array}{c|cc} k & 0 & 1 \\ \hline \pi & \frac{\pi}{\sqrt{\pi}} & \frac{\pi k\pi}{\sqrt{\pi}} \end{array}$$

$$\pi + \frac{\pi}{\sqrt{\pi}} = \pi k\pi + \frac{\pi k\pi}{\sqrt{\pi}} \Rightarrow \pi = \pi k\pi + \frac{\pi k\pi}{\sqrt{\pi}} \rightarrow \begin{array}{c|cc} k & 0 & 1 \\ \hline \pi & \frac{\pi}{\sqrt{\pi}} & \frac{\pi k\pi}{\sqrt{\pi}} \end{array}$$

$$\frac{\pi k\pi}{\sqrt{\pi}} + \frac{\pi k\pi}{\sqrt{\pi}} = \frac{\pi k\pi}{\sqrt{\pi}}$$

$$\sin\left(\frac{\pi}{\sqrt{\pi}} - \pi\right) = -\cos \pi \Rightarrow -\sin \pi, \cos \pi = 1 \Rightarrow -\pi \sin \pi = 1$$

$$\Rightarrow \sin \pi = -\frac{1}{\pi} \Rightarrow \begin{array}{l} \pi = \pi k\pi - \frac{\pi}{\sqrt{\pi}} \Rightarrow \pi = k\pi - \frac{\pi}{\sqrt{\pi}} \\ \pi = \pi k\pi + \pi + \frac{\pi}{\sqrt{\pi}} \Rightarrow \pi = k\pi + \frac{\pi k\pi}{\sqrt{\pi}} \end{array}$$

$$\begin{array}{c|cc} k & 0 & 1 \\ \hline \pi & \frac{\pi}{\sqrt{\pi}} & \frac{\pi k\pi}{\sqrt{\pi}} \end{array}$$

$$\begin{array}{c|cc} k & 0 & 1 \\ \hline \pi & \frac{\pi}{\sqrt{\pi}} & \frac{\pi k\pi}{\sqrt{\pi}} \end{array}$$

$$\frac{11\pi + \pi k\pi + \pi k\pi + \pi k\pi}{\sqrt{\pi}} = \frac{\pi k\pi}{\sqrt{\pi}}$$

مربوط به این دستاورد: $\cos^2 \alpha \times \cos^2 \beta \times \cos^2 \gamma = \frac{1}{9} \Rightarrow \cos \alpha, \cos \beta, \cos \gamma = \pm \frac{1}{3}$

$$\frac{1}{\sqrt{\pi}} \sin \pi \times \cos^2 \pi \times \cos^2 \pi = \pm \frac{1}{\sqrt{\pi}} \Rightarrow \frac{1}{\sqrt{\pi}} \sin \pi = \pm \frac{1}{\sqrt{\pi}}$$

$$\Rightarrow \frac{1}{\sqrt{\pi}} \sin \pi = +\frac{1}{\sqrt{\pi}} \sin \pi \Rightarrow \alpha = \frac{\pi k\pi}{\sqrt{\pi}}$$

$$\alpha = \frac{\pi k\pi}{\sqrt{\pi}} + \frac{\pi}{\sqrt{\pi}}$$

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$$\tan \pi = \frac{1}{\tan \pi} \Rightarrow \tan \pi = \cot \pi \Rightarrow \tan \pi = \tan\left(\frac{\pi}{\sqrt{\pi}} - \pi\right)$$

$$\Rightarrow \pi = k\pi + \frac{\pi}{\sqrt{\pi}} - \pi \Rightarrow \pi = k\pi + \frac{\pi}{\sqrt{\pi}} \Rightarrow \pi = \frac{\pi k\pi}{\sqrt{\pi}} + \frac{\pi}{\sqrt{\pi}}$$

$$\begin{array}{c|cc} k & 0 & 1 \\ \hline \pi & \frac{\pi}{\sqrt{\pi}} & \frac{\pi k\pi}{\sqrt{\pi}} \end{array}$$

$$\frac{11\pi + \pi k\pi}{\sqrt{\pi}} = \frac{\pi k\pi}{\sqrt{\pi}}$$

$$\frac{9\pi}{\sqrt{\pi}} + \frac{11\pi}{\sqrt{\pi}} + \frac{13\pi}{\sqrt{\pi}} + \frac{15\pi}{\sqrt{\pi}} = 4\pi$$