

هوتا ہے۔ - ریاضی کے مسائل ۱۷

$[0, 2\pi]$

$$\Lambda \cos x - \tan^2 x = 1$$

$$\Lambda \cos^2 x - \sin^2 x = \cos^2 x$$

$$\sin^2 x + \cos^2 x = 1$$

$$\Lambda \cos^2 x + \cos^2 x - 1 = \cos^2 x$$

$$\cos^2 x - 1 = \sin^2 x$$

$$\cos^2 x = \frac{1}{\Lambda} \rightarrow \cos x = \frac{1}{\Lambda}$$

$$\cos x = \cos \frac{\pi}{\Lambda}$$

اجواب

$$x = 2k\pi + \frac{\pi}{\Lambda} \rightarrow \frac{\pi}{\Lambda}$$

$$x = 2k\pi - \frac{\pi}{\Lambda} \rightarrow \frac{2\pi}{\Lambda}$$

$$\omega \sin^2 x + \Lambda \cos^2 x = -\Lambda$$

$$\omega(1 - \cos^2 x) + \Lambda \cos^2 x - \Lambda \cos^2 x = -\Lambda$$

$$\omega - \omega \cos^2 x + \Lambda \cos^2 x - \Lambda \cos^2 x = -\Lambda$$

$$\Lambda \cos^2 x - \omega \cos^2 x - \Lambda \cos^2 x + \Lambda = 0 \rightarrow \cos x = -1$$

$$(\cos x + 1)(\Lambda \cos^2 x - \omega \cos^2 x + \Lambda) \rightarrow \cos x = -1,$$

$$\cos^2 x = \Lambda \cos^2 x - \omega \cos^2 x$$

$$x = \pm \pi$$

$$\cos^2 x = 1 - \Lambda \sin^2 x$$

$$\Lambda \sin^2 x \cos^2 x + \sin^2 x = 1$$

$$\sin^2 x (\Lambda \cos^2 x + 1) = 1$$

$$(\Lambda \cos^2 x + 1) \sin^2 x = 1$$

$$\Lambda \sin^2 x - \Lambda \sin^2 x = 1$$

$$\sin^2 x = 1 \rightarrow x = 2k\pi + \frac{\pi}{\Lambda}$$

$$x = 2k\pi + \frac{\pi}{\Lambda}$$

SUBJECT:

مستطیل محلی - یانچ و تریس تکلیف ۱۷

$[0, \pi]$

$$\tan \frac{\pi}{\sqrt{r}} = -\sqrt{r} \quad \sin\left(\frac{\pi + \pi x}{\frac{\pi}{\sqrt{r}} + \pi x}\right) \quad \cos\left(\frac{\pi + \pi x}{\frac{\pi}{\sqrt{r}} + \pi x}\right)$$

$$\sin \pi x = \frac{1}{\sqrt{r}} \sin \frac{\pi}{\sqrt{r}} \quad \frac{1}{\cos \pi x} = \frac{1}{\sin \pi x} \Rightarrow \frac{1}{\cos \pi x} - \frac{1}{\sin \pi x} = 0 \Rightarrow \frac{1}{\cos \pi x} - \frac{1}{\sin \pi x} = 0$$

استفاده از اتحاد هاروی → $\frac{\sin \pi}{\pi} \rightarrow \frac{\pi}{\sqrt{r}}$

$$\pi x = \pi k\pi + \frac{\pi}{\sqrt{r}} \rightarrow x = k\pi + \frac{\pi}{\sqrt{r}} \rightarrow \left(\frac{\pi}{\sqrt{r}}\right)$$

$$\pi x = \pi k\pi + \frac{\pi}{\sqrt{r}} \rightarrow x = k\pi + \frac{\pi}{\sqrt{r}} \rightarrow \left(\frac{\pi}{\sqrt{r}}\right)$$

$$\cos\left(x + \frac{\pi}{\sqrt{r}}\right) = \frac{1}{\sqrt{r}} \quad m(\cos x - \sin x) - \sqrt{r} \sin \pi x = \sqrt{r}$$

$$\cos\left(x + \frac{\pi}{\sqrt{r}}\right) = \frac{1}{\sqrt{r}} \rightarrow \frac{\sqrt{r}}{r}(\cos x - \sin x) = \frac{1}{\sqrt{r}} \rightarrow \cos x - \sin x = \frac{1}{\sqrt{r}}$$

$$(\cos x - \sin x)^2 = \frac{1}{r} \rightarrow 1 - \sin x \cos x = \frac{1}{r} \rightarrow 1 - \sin \pi x = \frac{1}{r}$$

$$\sin \pi x = \frac{1}{r} \rightarrow \sqrt{\frac{r}{r}} m - \frac{\sqrt{r}}{r} = \sqrt{r} \rightarrow \sqrt{\frac{r}{r}} m = \sqrt{r}$$

$m = 4$

$[0, \pi]$

$$\sin\left(x + \frac{\pi}{\sqrt{r}}\right) \cos\left(x - \frac{\pi}{\sqrt{r}}\right) = 1$$

$$\sin\left(\frac{\pi}{\sqrt{r}} + \alpha\right) \cos(\alpha) = 1$$

$$x - \frac{\pi}{\sqrt{r}} = \alpha$$

$$\cos^2 \alpha = 1 \rightarrow \cos \alpha = \pm 1$$

$$x + \frac{\pi}{\sqrt{r}} = \frac{\pi}{\sqrt{r}} + \alpha$$

$$\alpha = k\pi$$

$$x - \frac{\pi}{\sqrt{r}} = k\pi \rightarrow x = k\pi + \frac{\pi}{\sqrt{r}}$$

باب

$$\frac{\pi}{\sqrt{r}}, \frac{\pi}{\sqrt{r}} \leftarrow$$

SUBJECT:

ماتریکس - ریاضی ۲ - کتب ۱۷

$$[-\pi, \pi]$$

$$\sin x + \sqrt{3} \cos x = \sqrt{4}$$

$$= \frac{a}{\sqrt{a^2+b^2}} \sin(x+\alpha) \rightarrow \frac{1}{\sqrt{1+3}} \sin(x+\frac{\pi}{6}) = \sqrt{4}$$

$$\tan \alpha = \frac{b}{a}$$

$$\tan \alpha = \sqrt{3} \rightarrow \alpha = \frac{\pi}{6}$$

$$\sin(x+\frac{\pi}{6}) = \sqrt{4} \sin \frac{\pi}{6}$$

$$x + \frac{\pi}{6} = k\pi + \frac{\pi}{6} \rightarrow x = k\pi$$

$$x + \frac{\pi}{6} = k\pi + \frac{5\pi}{6} \rightarrow x = k\pi + \frac{2\pi}{3}$$

$$\text{مجموع} = \frac{9\pi}{2}$$

$$[0, \pi]$$

$$\sin x \sin(\frac{\pi}{2} - x) = 1$$

$$\sin x \cos x = 1 \rightarrow \sin 2x = 2 \sin x \cos x$$

$$2x = k\pi + \frac{\pi}{2} \rightarrow x = k\pi + \frac{\pi}{4} \rightarrow \frac{\pi}{4}, \frac{5\pi}{4}$$

$$2x = k\pi - \frac{\pi}{2} \rightarrow x = k\pi - \frac{\pi}{4} \rightarrow \frac{3\pi}{4}, \frac{7\pi}{4}$$

$$\text{مجموع} = 2\pi$$

$$[0, \pi]$$

$$\frac{(1 + \cos 2x)(1 + \cos 4x)(1 + \cos 8x)}{2 \cos x} = \frac{1}{\lambda}$$

$$\lambda \cos x \cos 2x \cos 4x = \frac{1}{\lambda} \rightarrow \cos x \cos 2x \cos 4x = \pm \frac{1}{\lambda}$$

$$\sin 4x = \pm \sin x \rightarrow \alpha = k\pi \rightarrow \frac{\pi}{4}$$

$$[\pi, 2\pi]$$

$$\tan 3x \tan x = 1$$

$$\cot(\frac{\pi}{3} - 3x) = \cot x$$

$$\frac{\pi}{3} - 3x = k\pi + x$$

$$-4x = k\pi - \frac{\pi}{3}$$

$$x = \frac{\pi}{4} - \frac{k\pi}{4}$$

$$\text{مجموع} = 4\pi$$

Hirmandpaper