

1) $\Lambda \cos^2 - \frac{\sin^2}{\cos^2} = 1 \rightarrow \Lambda \cos^2 - \sin^2 = \cos^2 \rightarrow \Lambda \cos^2 = 1 \rightarrow \cos^2 = \frac{1}{\Lambda}$ ملینا کیانی

1915 افین



$\cos = \frac{1}{\sqrt{2}}$ نقطه 2

2

2) $\cos 2x = \frac{1 + \cos^2 x}{2} \rightarrow 2 \sin^2 x + 1 - \cos^2 x = 0$
 $2 \cos^2 x - 1 = \cos^2 x$ معنونا منی شد

1175

باید بنویس جواب ها اشتراک گیری!

$\sin x = 0 \rightarrow -\pi \leq x \leq \pi$ $\cos^2(\frac{2x}{2}) = 0 \rightarrow \frac{2x}{2} = 2k\pi \pm \frac{\pi}{2} \rightarrow x = k\pi \pm \frac{\pi}{4}$

3) $2 \sin^2 x + 1 = \cos^2 x$

$2 \sin^2 x - \cos^2 x + 1 = 0 \rightarrow (\sin^2 x + 1)(\sin^2 x - \cos^2 x + 1) = 0$
 $2x^2 - x + 1 = 0$

$\sin x = -1 \rightarrow x = \frac{3\pi}{2}$

$(2 \sin^2 x - 1) = 0 \rightarrow \sin^2 x = \frac{1}{2} \rightarrow x = \frac{\pi}{4} \text{ و } \frac{3\pi}{4}$

$\boxed{\frac{2\pi}{2}}$

4) $\frac{1}{1 + \cos(x)} = \frac{-1}{-\sin(x)}$ $\sin^2 x + \cos^2 x = 0$
 $2 \sin^2 x \cos^2 x + \cos^2 x = 0 \rightarrow \cos^2 x (2 \sin^2 x + 1) = 0$

$x = \frac{2\pi}{12} - \frac{\pi}{12} = \frac{\pi}{12}$ $\tan \frac{\pi}{12} = \sqrt{3}$ $\frac{2\pi}{12} \text{ و } \frac{\pi}{12} = x$

5) $\frac{\sqrt{2}}{2} \cos x = \frac{\sqrt{2}}{2} \sin x = \frac{\sqrt{2}}{2} (\cos x - \sin x) = \frac{1}{\sqrt{2}}$

$\sin^2 x + \cos^2 x - 2 \sin x \cos x = \frac{2}{\sqrt{2}} \rightarrow 1 - \sin^2 x = \frac{2}{\sqrt{2}} \rightarrow \sin^2 x = \frac{1}{\sqrt{2}}$

$m(\cos - \sin) - \sqrt{2} \sin^2 x = \sqrt{2} \rightarrow m \frac{\sqrt{2}}{\sqrt{2}} = 2\sqrt{2} \rightarrow m = 4$

6) $\sin(x + \frac{\pi}{4}) = 1 \rightarrow \sin(x + \frac{\pi}{4}) = (\pm 1) \rightarrow 2k\pi \pm \frac{\pi}{4}$

$x = 2k\pi \pm \frac{\pi}{4} - \frac{\pi}{4}$ نقطه 2

7) $\frac{\sin x + \sin \frac{\pi}{4}}{\cos \frac{\pi}{4}} \times \cos = \sqrt{2} \rightarrow \sin(x + \frac{\pi}{4}) = \sqrt{2} \cos \frac{\pi}{4} \rightarrow x + \frac{\pi}{4} = 2k\pi + \frac{\pi}{4}$

$x = -\frac{\pi}{4} \text{ و } \frac{2\pi}{12} \text{ و } \frac{4\pi}{12} \rightarrow \frac{\pi}{6}$ نقطه 2

$$1) \sin \alpha \times -\cos \alpha = 1$$

$$\sin \alpha = -\frac{1}{r}$$

$$r\alpha = r k \pi - \frac{\pi}{4} \rightarrow \alpha = k \pi - \frac{\pi}{4}$$

$$r\alpha = r k \pi + \frac{\pi}{4} \rightarrow \alpha = k \pi + \frac{\pi}{4}$$

$$[0, 2\pi] \rightarrow 2\pi$$

$$\frac{\pi}{4} + \frac{11\pi}{4} + \frac{19\pi}{4} + \frac{27\pi}{4} = 2\pi$$

$$9) (r \cos \alpha) (r \cos \beta) (r \cos \gamma) = \frac{1}{n}$$

$$\cos \alpha \times \cos \beta \times \cos \gamma = \pm \frac{1}{n}$$

$$\frac{\sin \alpha}{\sin \alpha} \rightarrow \frac{1}{n} \sin n\alpha = \pm \frac{1}{n} \sin \alpha$$

$$\sin n\alpha = \pm \sin \alpha = \sin(\pm \alpha)$$

$$+\alpha \rightarrow \alpha = \frac{r k \pi}{r}$$

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

$$-\alpha \rightarrow \alpha = \frac{r k \pi}{r}$$

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

$$max = \frac{n\pi}{9}$$

$$10) \tan r\alpha = \frac{1}{\tan \alpha}$$

$$\tan\left(\frac{\pi}{r} - \alpha\right)$$

$$\tan r\alpha = \cot \alpha$$

$$r\alpha = k\pi + \frac{\pi}{r} - \alpha$$

$$\alpha = k\frac{\pi}{r} + \frac{\pi}{n}$$

$$\frac{9\pi}{n} + \frac{11\pi}{n} + \frac{13\pi}{n} + \frac{15\pi}{n}$$

$$= 9\pi$$

$$\cos x = 2 \cos^2 \frac{x}{2} - 1 \quad (\text{فرمول هیمی})$$

- ۲

$$2 \sin^2 x + 2(2 \cos^2 \frac{x}{2} - 1) = -2 \rightarrow 2 \sin^2 x + 4 \cos^2 \frac{x}{2} - 2 = -2$$

حاصل جمع دو عدد از صفر است پس هر دو صفر بوده اند!

$$2 \sin^2 x = 0 \rightarrow \sin x = 0 \rightarrow x = k\pi \xrightarrow{-\pi \leq x \leq \pi} x = \pi \cup -\pi \cup 0$$

$$2 \cos^2 \frac{x}{2} = 0 \rightarrow \cos \frac{x}{2} = 0 \rightarrow \frac{x}{2} = k\pi + \frac{\pi}{2} \rightarrow x = \frac{2k\pi + \pi}{1}$$

$$\xrightarrow{-\pi \leq x \leq \pi} x = -\pi \cup -\frac{\pi}{2} \cup \frac{\pi}{2} \cup \pi$$

انتخاب دو مجموعه جواب $[-\pi, \pi]$ است