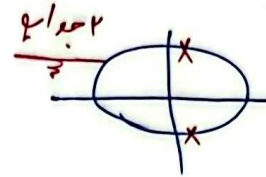


$$1 \cos \alpha \cdot \frac{1}{\cos \alpha} = 2 \cos \alpha \cdot \frac{1}{x} = 2 \cos \alpha \cdot \frac{1}{x}$$



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$$\sqrt{\sin^2 \alpha + 2 \cos^2 \alpha + 2 \cos(2\alpha)} = 0$$

$\sqrt{1 - \cos^2 \alpha}$ $\sqrt{\cos^2 \alpha - 2 \cos \alpha}$

$$\cos \alpha = 1 \Rightarrow \alpha = 2k\pi + \pi$$

$\alpha = \pi, 3\pi$

۲ جواب

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$$1 \cos^3 \alpha - 6 \cos^2 \alpha - 4 \cos \alpha + 7 = 0$$

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$$(2 \cos \alpha + 1)(\cos^2 \alpha - 3 \cos \alpha + 7) = 0$$

$$- \cos^3 \alpha + 3 \sin \alpha - 1 = 0 \Rightarrow (\sin \alpha + 1)(-\cos^3 \alpha + \cos \alpha - 1) = 0$$

$-(2 \sin \alpha - 1)^2$

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$$\sin \alpha = 1 \Rightarrow \sin \alpha = \frac{2k\pi}{\pi}$$

$$\sin \alpha = \frac{1}{2} \Rightarrow \alpha = 2k\pi + \frac{\pi}{6} \Rightarrow \alpha = \frac{\pi}{6}$$

$$2k\pi + \frac{5\pi}{6} \Rightarrow \alpha = \frac{5\pi}{6}$$

$$\frac{\pi}{4} + \frac{5\pi}{4} + \frac{3\pi}{4} = \frac{9\pi}{4}$$

$$\frac{1}{\cos \alpha} - \frac{1}{\cos \alpha} = 2 \cos \alpha \cdot \cos \alpha = 2 \cos^2 \alpha = 2 \cos \alpha \cdot 2k\pi \pm \pi$$

$$\alpha = 2k\pi \Rightarrow \alpha = \pi$$

$$\alpha = \frac{3\pi}{4} \Rightarrow \alpha = \frac{\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$$

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$$2\alpha = 2\pi \Rightarrow \tan \alpha = 0$$

$$\frac{\sqrt{2}}{2} \cos \alpha - \frac{\sqrt{2}}{2} \sin \alpha = \frac{1}{\sqrt{2}} \Rightarrow \cos \alpha - \sin \alpha = \frac{\sqrt{2}}{2}$$

$$\left(\frac{\sqrt{2}}{2}\right)^2 = 1 - \frac{2 \sin \alpha \cos \alpha}{2}$$

$$m \times \frac{\sqrt{2}}{2} - \sqrt{2} = \sqrt{2} \Rightarrow m = 4$$

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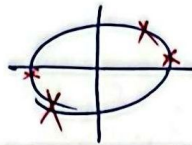
$$\sin\left(u + \frac{\pi}{4}\right) \cos\left(\frac{\pi}{4} - u\right) = 1 \Rightarrow \frac{1}{r} \sin\left(ru + \frac{\pi}{4}\right) s$$

$$\cos\left(u + \frac{\pi}{4}\right)$$

$$\sin\left(ru + \frac{\pi}{4}\right) s \sin \frac{\pi}{4}$$

$$ru + \frac{\pi}{4} s r \cos \frac{\pi}{4} = \alpha s \kappa \pi - \frac{\pi}{14}$$

$$ru + \frac{\pi}{4} s r \cos \frac{\pi}{4} = \alpha s \kappa \pi + \frac{\pi}{4}$$



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$$a \sin u + b \cos u = \frac{a}{\cos \alpha} \sqrt{a^2 + b^2} \sin(u + \alpha) \quad \tan \alpha = \frac{b}{a}$$

$$-\frac{u\pi}{14} - \frac{\pi}{4} + \frac{14\pi}{14} + \frac{r\pi}{14}$$

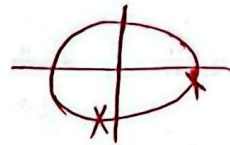
$$\sin u \sqrt{r} \cos u = r \sin\left(u + \frac{\pi}{4}\right) s \sqrt{r}$$

$$\sin\left(u + \frac{\pi}{4}\right) s \frac{\sqrt{r}}{r}$$

$$\sin\left(u + \frac{\pi}{4}\right) s \sin \frac{\pi}{4}$$

$$u + \frac{\pi}{4} s r \cos \frac{\pi}{4} = \alpha s r \kappa \pi - \frac{\pi}{14}$$

$$u + \frac{\pi}{4} s r \cos \frac{\pi}{4} = \alpha s r \kappa \pi - \frac{u\pi}{14}$$



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$$-r \sin \kappa \pi s 1$$

$$\sin \kappa \pi s \frac{1}{r}$$

$$r \kappa s r \kappa \pi - \frac{\pi}{4} = \alpha s \kappa \pi - \frac{\pi}{14}$$

$$r \kappa s r \kappa \pi + \frac{u\pi}{4} = \alpha s \kappa \pi + \frac{u\pi}{14}$$

$$\frac{11\pi}{14} + \frac{u\pi}{14} + \frac{14\pi}{14} = \frac{r u \pi}{14}$$



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$$\frac{1}{r} \sin \kappa \pi \quad \frac{1}{14} \sin \kappa \pi \quad \frac{1}{44} \sin \kappa \pi$$

$$\sin \kappa \pi \times (\cos \kappa \pi) (\cos \kappa \pi) s \frac{1}{\Lambda}$$

$$\sin \kappa \pi$$

$$\Rightarrow \sin \kappa \pi s \Lambda \sin \kappa \pi$$

$$\sin \kappa \pi s r \sqrt{r} \sin \kappa \pi$$

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$$\tan(\kappa \pi) = \cot \alpha \Rightarrow \cot \kappa \pi + \frac{\pi}{4} = \cot \kappa \pi + \frac{\pi}{4}$$

$$\frac{9\pi}{14} + \frac{11\pi}{14} + \frac{14\pi}{14} + \frac{16\pi}{14} = \frac{50\pi}{14}$$

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