

$$x^2 - (\sin \alpha)x - \frac{1}{\varepsilon} \cos^2 \alpha = 0$$

$$\text{if } x = \frac{1}{\varepsilon} \Rightarrow \frac{\varepsilon}{\varepsilon} - \frac{\varepsilon}{\varepsilon} \sin \alpha - \frac{1}{\varepsilon} \cos^2 \alpha = 0 \Rightarrow$$

$$\frac{\varepsilon}{\varepsilon} (1 - \sin \alpha) = \frac{1}{\varepsilon} \cos^2 \alpha \quad \cos^2 \alpha = 1 - \sin^2 \alpha$$

$$\frac{\varepsilon}{\varepsilon} = \frac{1 - \sin^2 \alpha}{1 - \sin \alpha} = \frac{(1 + \sin \alpha)(1 - \sin \alpha)}{(1 - \sin \alpha)} = 1 + \sin \alpha$$

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

$$1 + \cot^2 \alpha = \frac{1}{\sin^2 \alpha} \quad 1 + \tan^2 \alpha = \frac{1}{\cos^2 \alpha} \Rightarrow$$

$$* \frac{11}{11} - \frac{4\varepsilon}{11} = \frac{1}{11} \Rightarrow 1 + \tan^2 \alpha = \frac{11}{11}$$

$$\log(\sin \alpha) - \log(-\cos \alpha) = \log 3$$

$$\sin \alpha - \cos \alpha = ?$$

$$\log(-\tan \alpha) = \log 3 \Rightarrow -\tan \alpha = 3 \Rightarrow \tan \alpha = -3$$

$$\sin \alpha > 0$$

$$\cos \alpha > 0 \Rightarrow \cos \alpha < 0 \quad \left. \begin{array}{l} \sin \alpha > 0 \\ \cos \alpha < 0 \end{array} \right\} \text{مربع دوم}$$

مربع دوم

$$1 + \tan^2 \alpha = \frac{1}{\cos^2 \alpha} \Rightarrow 1 + 9 = \frac{1}{\cos^2 \alpha} \Rightarrow \frac{1}{\cos^2 \alpha} = 10 \Rightarrow \cos^2 \alpha = \frac{1}{10}$$

$$\Rightarrow \cos \alpha = \frac{1}{\sqrt{10}} = \frac{\sqrt{10}}{10} \quad \sin^2 \alpha = 1 - \frac{1}{10} = \frac{9}{10} \Rightarrow \sin \alpha = \frac{3\sqrt{10}}{10}$$

$$\Rightarrow \sin \alpha - \cos \alpha = \frac{3\sqrt{10}}{10} - \left(-\frac{\sqrt{10}}{10}\right) = \frac{4\sqrt{10}}{10} = \frac{2\sqrt{10}}{5}$$

$$\sin^4 \theta + 1 - \sin^2 \theta = \frac{F}{8} \Rightarrow x^2 - x + \frac{1}{8} = 0$$

$$\Rightarrow \Delta = 1 - 4\left(\frac{1}{8}\right) = \frac{1}{8} \Rightarrow \cos x = \frac{1 \pm \sqrt{\frac{1}{8}}}{2} = \sin^2 \theta$$

$$\cos^4 \theta + 1 - \cos^2 \theta = \frac{F}{8} \Rightarrow \cos^2 \theta = 1 \pm \sqrt{\frac{1}{8}}$$

$$\cos^4 \theta + \sin^2 \theta$$

$$\Rightarrow \cos^4 \theta \Rightarrow \left\{ \begin{array}{l} 1 + \frac{1}{8} + 2\sqrt{\frac{1}{8}} \\ 1 + \frac{1}{8} - 2\sqrt{\frac{1}{8}} \end{array} \right\}$$

~~جوابی~~

مثلاً

$$\Rightarrow \frac{1 + \frac{1}{8} \pm 2\sqrt{\frac{1}{8}}}{2} + \frac{1 \pm \sqrt{\frac{1}{8}}}{2}$$

-9

$$\frac{P}{\sin x} + \frac{P}{\cos x} = 0 \Rightarrow \frac{P \cos x + P \sin x}{\cos x \sin x} = 0$$

$$\Rightarrow P \cos x + P \sin x = 0 \Rightarrow P \cos x = -P \sin x \Rightarrow \tan x = -\frac{P}{P}$$

$$\cot x + \tan x = -\frac{P}{P} - \frac{P}{P} = \frac{-P - P}{P} = \boxed{\frac{-2P}{P}} \quad \cot x = -\frac{P}{P}$$