

**در بیان اول است**

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

$\cos \alpha > 0 \Rightarrow \frac{1 - \sin \alpha}{\cos \alpha} = \frac{1 - \sin \alpha}{\cos \alpha} \checkmark$

باید  $\sin \alpha$  مثبت باشد تا بتواند به قرار خود برود

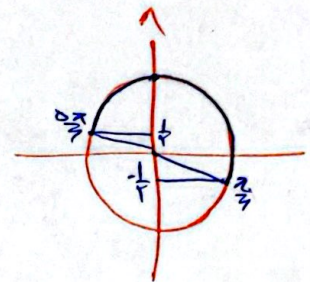
$$\cot \alpha = \frac{\cos \alpha}{|\sin \alpha|} \xrightarrow{\sin \alpha > 0} \cot \alpha = \frac{\cos \alpha}{\sin \alpha}$$

$\left. \begin{matrix} \cos \alpha > 0 \\ \sin \alpha > 0 \end{matrix} \right\}$

$-\frac{\pi}{14} < \alpha < \frac{\pi}{14}$

$$\sin^2 m = \frac{m-1}{4} \Rightarrow -\frac{\pi}{4} < \alpha < \frac{\pi}{4}$$

$$-\frac{1}{4} < \sin^2 m < \frac{1}{4} \Rightarrow -\frac{1}{2} < m-1 < \frac{1}{2} \Rightarrow -1 < m < 1$$



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

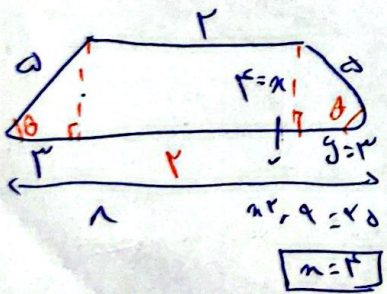
$$\frac{\sin \alpha}{\cos \alpha} + \frac{\cos \alpha}{\sin \alpha} = \frac{\sin^2 \alpha + \cos^2 \alpha}{\sin \alpha \cos \alpha} = \frac{1}{\sin \alpha \cos \alpha} = -\frac{1}{\sqrt{2}}$$

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

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

$|\sin \alpha + \cos \alpha| = \frac{1}{\sqrt{2}}$

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



$\frac{y}{\omega} = \frac{1}{4} \Rightarrow y = \frac{\omega}{4}$

$$S = \frac{(r+R) \cdot y}{2} = r$$

$\tan(140^\circ) \tan(-140^\circ) = \sin(140^\circ) \cos(140^\circ) = \tan\left(\frac{7\pi}{9} + 10\right) \tan(-\pi + 10) =$

$$\sin\left(\frac{7\pi}{9} + 10\right) \cos\left(\frac{7\pi}{9} + 10\right) = -\cos(10) (\tan(10) + \sin(10^\circ) \sin(10^\circ))$$

$$-1 + \sin^2 10 = -(1 - \sin^2 10) = -(\cos^2 10) = k \cos^2 10$$

$k = -1$

