

۱۹، ۲۵

$$\frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 - \sin \alpha}{|\cos \alpha|} \Rightarrow \cos \alpha = (+)$$

$$\cot \alpha = \frac{\cos \alpha}{|\sin \alpha|} \Rightarrow \cot \alpha = (+)$$

نام اول ✓

۱ (۲)

$$-\frac{\pi}{6} < 2\pi < \frac{5\pi}{6} \Rightarrow -\frac{1}{\sqrt{3}} < \sin 2\pi < 1 \Rightarrow -\frac{1}{\sqrt{3}} < \frac{m-1}{4} < 1 \Rightarrow -2 < m-1 < 4$$

درست!  $\Rightarrow -1 < m < 5$

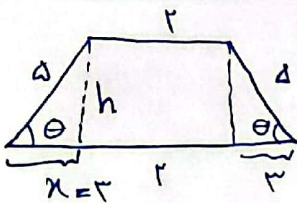
۲ (۲)

$$\frac{\sin \alpha + \cos \alpha}{\cos \alpha} = \frac{1}{\sin \alpha} = -3 \Rightarrow \sin \alpha \cos \alpha = -\frac{1}{3}$$

$$(\sin \alpha + \cos \alpha)^2 = 1 + 2 \sin \alpha \cos \alpha \Rightarrow \sin \alpha + \cos \alpha = \sqrt{\frac{1}{3}} = \frac{1}{\sqrt{3}} \Rightarrow \sin \alpha + \cos \alpha = -\frac{1}{\sqrt{3}}$$

$$(\sin \alpha + \cos \alpha)(\sin \alpha + \cos \alpha - \sin \alpha \cos \alpha) = \frac{1}{\sqrt{3}} \left( -\frac{1}{\sqrt{3}} \right) \left( 1 + \frac{1}{3} \right) = -\frac{1}{\sqrt{3}} = -\frac{2\sqrt{3}}{6} = -\frac{\sqrt{3}}{3}$$

۳ (۲)



$$\cos \theta = \frac{1}{2} \Rightarrow \frac{\alpha}{2} = \frac{\pi}{3} \Rightarrow \alpha = \frac{2\pi}{3}$$

$$\sin \theta = \frac{h}{1} \Rightarrow h = \frac{\sqrt{3}}{2}$$

$$S = \frac{(2+1) \frac{\sqrt{3}}{2}}{2} = \frac{3\sqrt{3}}{4}$$

۴ (۲)

$$-\tan\left(\frac{2\pi}{3} + 10\right) \tan(\pi - 10) - \sin(4\pi + 10) \cos\left(\frac{2\pi}{3} - 10\right) = (\cot 10)(-\tan 10)$$

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

$$\Rightarrow k = -1$$

۵ (۲)

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

$$= \cos \sqrt{r} \left(\frac{r}{r} + 1\right) = \frac{0}{r} \cos \sqrt{r} = \frac{0}{r} \checkmark$$

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$$f\left(\frac{\pi}{4}\right) = 19 \cos^2\left(\frac{\pi}{4}\right) \cos^2\left(\frac{\pi}{4}\right) \cos^2\left(\frac{\pi}{4}\right) \cos^2\left(\frac{\pi}{4}\right) = 19 \left(\frac{1 + \cos\left(\frac{\pi}{4}\right)}{2}\right) \cos^2\left(\frac{\pi}{4}\right) \cos^2\left(\frac{\pi}{4}\right) \cos^2\left(\frac{\pi}{4}\right)$$

$$= 19 \left(\frac{1 + \sqrt{2}}{2}\right) \left(\frac{\sqrt{2}}{2}\right)^2 \left(\frac{1}{2}\right)^2 \left(\frac{1}{2}\right)^2 = \left(\frac{r + \sqrt{r}}{r}\right) \left(\frac{r}{r}\right) \times \frac{1}{16} \checkmark = \frac{9 + 2\sqrt{18}}{16} \text{ وقت!}$$

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$$r + r \sin \pi = 1 - \sin \pi \Rightarrow 0 \sin \pi = -r \Rightarrow \sin \pi = \frac{-r}{0}, \cos \pi = \frac{-r}{0}$$

(1, Va)

$$\tan \frac{\pi}{r} = \sqrt{\frac{\sin^2 \frac{\pi}{r}}{\cos^2 \frac{\pi}{r}}} = \sqrt{\frac{1 - \cos \pi}{1 + \cos \pi}} = \sqrt{\frac{1 - \frac{-r}{0}}{1 + \frac{-r}{0}}} = \sqrt{\frac{1 + \frac{r}{0}}{1 - \frac{r}{0}}} = \sqrt{\frac{1 + \frac{r}{0}}{1 - \frac{r}{0}}}$$

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$$\pi < \pi < \frac{r\pi}{r} \rightarrow \frac{\pi}{r} < \frac{\pi}{r} < \frac{r\pi}{r} \xrightarrow{\text{موجبات}} \tan \frac{\pi}{r} < 0$$

$$\frac{r \cos \frac{\theta}{r}}{r \sin \frac{\theta}{r}} = \frac{\cos \frac{\theta}{r}}{\sin \frac{\theta}{r}} = \cot \frac{\theta}{r}$$

$$\Rightarrow r \cot \frac{\theta}{r} \Rightarrow k = r \checkmark$$

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$$\frac{r \cos \frac{\theta}{r}}{r \sin \frac{\theta}{r}} = \frac{\cos \frac{\theta}{r}}{\sin \frac{\theta}{r}} = \cot \frac{\theta}{r}$$

$$\cos\left(\frac{11\pi}{r} + \alpha\right) = \cos\left(\frac{r\pi}{r} + \alpha\right) = \left(\cos \frac{r\pi}{r} \cos \alpha\right) - \left(\sin \frac{r\pi}{r} \sin \alpha\right)$$

(1, 2)

$$\sin \alpha = \frac{\sqrt{r}}{1} \frac{r}{\sqrt{9r}} \quad \cos \alpha = \frac{\sqrt{9r}}{1}$$

$$\Rightarrow \left(\frac{-\sqrt{r}}{r} \times \frac{\sqrt{9r}}{1}\right) - \left(\frac{\sqrt{r}}{r} \times \frac{r}{1}\right) \frac{1}{r_0} - \frac{r}{r_0} = 1$$

$$= \frac{-\sqrt{19r}}{r} - \frac{r}{r} = \frac{-19}{r} - \frac{r}{r} = \frac{-11}{r} = \frac{9}{r}$$

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