

A, V, Δ

برای حل

درای موشی

$$\text{ان) } \tan \frac{11\pi}{4} + \sin \frac{10\pi}{8} + \cos \frac{11\pi}{4} \Rightarrow \tan \left(3\pi - \frac{\pi}{4} \right) + \sin \left(4\pi - \frac{\pi}{2} \right) + \cos \left(3\pi + \frac{\pi}{4} \right) \quad (1)$$

$$\rightarrow -\tan \frac{\pi}{4} + (-\sin \frac{\pi}{2}) + (-\cos \frac{\pi}{4}) \rightarrow -1 + \left(-\frac{\sqrt{2}}{2} \right) + \left(-\frac{\sqrt{2}}{2} \right) \rightarrow -1 + \left(-\frac{1}{2} \right) = -\frac{3}{2} \quad \checkmark$$

$$\rightarrow \tan \frac{11\pi}{4} \sin \frac{10\pi}{8} + \cos \frac{10\pi}{8} \Rightarrow \tan \left(3\pi - \frac{\pi}{4} \right) \sin \left(4\pi - \frac{\pi}{2} \right) + \cos \left(3\pi + \frac{\pi}{4} \right)$$

$$\rightarrow -\tan \frac{\pi}{4} \times -\sin \frac{\pi}{2} + (-\cos \frac{\pi}{4}) \rightarrow -\frac{\sqrt{2}}{2} \times -1 - \frac{\sqrt{2}}{2} = \frac{1}{2} - \frac{1}{2} = 0 \quad \checkmark$$

$$\frac{r \cos \alpha - \sin \alpha}{\cos \alpha + \sin \alpha} \rightarrow \frac{\cos}{\sin} = \frac{rk}{1k} \rightarrow \frac{rk - k}{rk + k} = \frac{1k}{0k} = \frac{1}{2} \quad \checkmark \quad (2)$$

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

$$\rightarrow \cos^2 = \frac{4}{10} \rightarrow \cos \alpha = \frac{1}{\sqrt{10}} \times \frac{\sqrt{10}}{\sqrt{10}} = \frac{\sqrt{10}}{10} \quad \checkmark$$

$$\text{ان) } \cos \left(3\pi - \frac{\pi}{2} + \alpha \right) = \cos \left(\frac{5\pi}{2} + \alpha \right) = \cos \frac{5\pi}{2} \cos \alpha - \sin \frac{5\pi}{2} \sin \alpha \quad (3)$$

$$\rightarrow -\frac{\sqrt{2}}{2} \times \frac{\sqrt{10}}{10} - \left(\frac{1}{2} \times \frac{\sqrt{2}}{10} \right) = -\frac{12}{20} - \frac{2}{20} = -\frac{14}{20} = -\frac{7}{10} \quad \checkmark$$

$$\rightarrow \sin \left(3\pi + \frac{\pi}{2} + \alpha \right) = \sin \left(\frac{7\pi}{2} + \alpha \right) = \sin \frac{7\pi}{2} \cos \alpha + \cos \frac{7\pi}{2} \sin \alpha$$

$$-\frac{\sqrt{2}}{2} \times \frac{\sqrt{10}}{10} + \frac{1}{2} \times \frac{\sqrt{2}}{10} = -\frac{12}{20} + \frac{2}{20} = -\frac{10}{20} = -\frac{1}{2} \quad \checkmark$$

$$\cos^2 = \frac{4}{10} - 2 \sin^2 \rightarrow \sin^2 + \frac{4}{10} - 2 \sin^2 = 1 \rightarrow \sin^2 = \frac{1}{10} \quad (4)$$

$$\rightarrow \sin^2 = \frac{1}{10} \rightarrow \sin \alpha = \frac{\sqrt{10}}{10} \rightarrow \cos = \frac{\sqrt{4}}{2} \rightarrow \tan^2 = \frac{1}{4} \rightarrow \tan = \frac{1}{2} \quad \checkmark$$

$$S = \frac{1}{2} \times \sqrt{10} \times \frac{1}{2} \times \sin \alpha = \frac{10}{10} \rightarrow \sin \alpha = \frac{10}{10} = \frac{10 \times 1}{10 \times \sqrt{10}} = \frac{1}{\sqrt{10}} = \frac{1}{\sqrt{10}} \quad \checkmark$$

$$\frac{\sqrt{10}}{2} < \alpha = 90^\circ \rightarrow \frac{120}{90} = \frac{4}{3} \quad \checkmark$$

$$S = ab \sin \alpha \rightarrow \frac{b}{a} = \frac{rk}{rk} \rightarrow rk \times rk \times \frac{1}{2} = 10 \rightarrow rk^2 = 20 \rightarrow rk = \sqrt{20}$$

$$k = \sqrt{10} = \sqrt{2} \times \sqrt{5} \rightarrow b = \sqrt{2}, a = \sqrt{2} \rightarrow 2(\sqrt{2}) + 2(\sqrt{2}) = 4\sqrt{2} \quad \checkmark$$

$$\left(\frac{1}{r} \times \partial \times V \times \sin A\right) - \left(\sin A \times \frac{1}{r} \times V \times \Sigma\right) = \frac{1}{r} V \partial \rightarrow \left(\frac{V \partial}{r} \sin A - \frac{V \partial}{r} \sin A\right) \quad (1) \quad (2)$$

$$\sin A \left(\frac{V \partial}{r} - \frac{V \partial}{r}\right) = \frac{1}{r} V \partial \rightarrow \frac{V}{r} \sin A \rightarrow \sin A = \frac{V}{\Sigma} \rightarrow \frac{1}{r} = \sin A \rightarrow \cos = \frac{\sqrt{r}}{r}$$

$$\tan = \frac{1}{r} \rightarrow \frac{\sqrt{r}}{r} \quad \frac{\frac{1}{r} \times \sin B \times AB \times CB}{\frac{1}{r} \times \sin B \times BM \times BN} = \frac{AB \times CB}{BM \times BN} = \frac{r}{1}$$

$$\frac{BM}{AM} = \frac{BM}{\cdot \Delta BM} = \frac{1}{1} = \frac{0}{\Sigma} \quad \checkmark$$

$$\frac{1}{\cos} = \frac{1}{\cos} \quad \frac{1}{\cos} = \frac{1}{\cos} \quad \frac{1}{\cos} = \frac{1}{\cos} \quad \frac{1}{\cos} = \frac{1}{\cos}$$

$$\frac{1}{\cos \alpha} = -\tan \alpha = -\frac{\sin \alpha}{\cos \alpha} = \frac{|\sin \alpha|}{\cos \alpha} \rightarrow$$

$$|\sin \alpha| = -\sin \alpha \rightarrow \sin \alpha < 0 \quad \checkmark$$

$$\frac{1}{|\cos \alpha|} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 + \sin \alpha}{|\cos \alpha|} \quad \text{جواب} \quad \cos \alpha > 0 \rightarrow |\cos \alpha| = \cos \alpha$$

$$\frac{1}{\cos \alpha} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 + \sin \alpha}{\cos \alpha} \rightarrow \cos \alpha > 0 \rightarrow \sin = \cos$$

$$\text{فرض} \quad \cos \alpha < 0 \rightarrow |\cos \alpha| = -\cos \alpha \rightarrow \frac{1}{-\cos \alpha} - \frac{\sin \alpha}{\cos \alpha} = \frac{1 + \sin \alpha}{-\cos \alpha}$$

$$\rightarrow \cos \alpha < 0 \quad \checkmark$$

الحل