

الف) $\tan \frac{11\pi}{8} + \sin \frac{10\pi}{8} \cos \frac{11\pi}{8} =$

$\tan 11\pi/8 + \sin 11\pi/8 \times \cos 11\pi/8 = -1 + \left(\frac{-\sqrt{2}}{2} \times \frac{-\sqrt{2}}{2} \right) = -1 + \frac{1}{2} = -\frac{1}{2}$

ب) $\tan \frac{11\pi}{8} \sin \frac{11\pi}{8} + \cos \frac{10\pi}{8} =$

$\tan 11\pi/8 \times \sin 11\pi/8 + \cos 11\pi/8 = \frac{-\sqrt{2}}{2} \times \frac{-\sqrt{2}}{2} - \frac{1}{2} = \frac{1}{2} - \frac{1}{2} = 0$

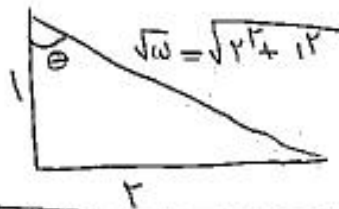
$G \cos x = F$

$\frac{\cos x}{\sin x} = \frac{F}{1}$

$\frac{10 \cos x - \sin x}{\cos x + \sin x} = \frac{10 \times \frac{1}{2} - \frac{1}{2}}{\frac{1}{2} + \frac{1}{2}} = \frac{10K - 1K}{1K} = \frac{9K}{1K} = 9$

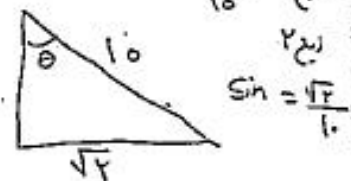
$\sin \alpha = r \cos \alpha$ (مربعی) $\cos \alpha = ? \rightarrow \frac{1}{\sqrt{10}} = \frac{\sqrt{10}}{10}$

$\tan = \frac{r \cos \alpha}{\cos \alpha} = r$

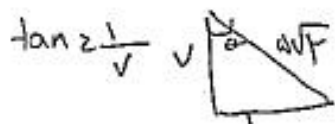


الف) $\cos \left(\frac{\pi}{2} + \frac{\pi}{2} + \alpha \right) = \cos \left(\frac{\pi}{2} + \alpha \right) = \cos \alpha + \cos \frac{\pi}{2}$

$\frac{-\sqrt{2}}{2} + \frac{-\sqrt{2}}{2} = \frac{-\sqrt{2}}{2} + \frac{-\sqrt{2}}{2} = -\sqrt{2}$



ب) $\sin \left(\frac{11\pi}{8} + \alpha \right) = \sin \left(\pi + \frac{\pi}{8} + \alpha \right) = \sin \left(\frac{9\pi}{8} + \alpha \right) = \sin \frac{9\pi}{8} + \sin \alpha$



$\sin \alpha = \frac{1}{\sqrt{10}} = \frac{\sqrt{10}}{10}$

$= \frac{-\sqrt{2}}{2} + \frac{\sqrt{2}}{2} = \frac{-\sqrt{2}}{2} + \frac{\sqrt{2}}{2} = 0$

$r \sin \gamma + \cos \gamma = \frac{F}{10}$

$\tan \gamma = \frac{\sin \gamma}{\cos \gamma} = \frac{\frac{1}{10}}{\frac{1}{10}} = 1$

$\sin \gamma + \frac{\sin \gamma + \cos \gamma}{1} = \frac{F}{10} \Rightarrow \sin \gamma = \frac{1}{10}$

$\cos \gamma = \frac{1}{10}$

$S = F \cdot \omega = \frac{1}{10} \times 1 \times \sqrt{10} \times \sin \alpha$

$\sin \alpha = \frac{\sqrt{10}}{10} \Rightarrow \alpha \rightarrow 9^\circ \text{ or } 18^\circ \Rightarrow \frac{\alpha_{\max}}{\alpha_{\min}} = \frac{18^\circ}{9^\circ} = 2$

موتوری $\rightarrow r \propto \frac{1}{r} \propto 1K \propto 1K \propto \sin 11\pi/8 = 9K \propto \frac{1}{10} = 1K \propto 10K$

$P = r(1K + 1K) = 2K \Rightarrow 10K \propto 10K \propto 10K$

$K \propto 1K$

$K = 10\sqrt{10}$

$$S_{ABC} - S_{APE} = 1/2 \Delta$$

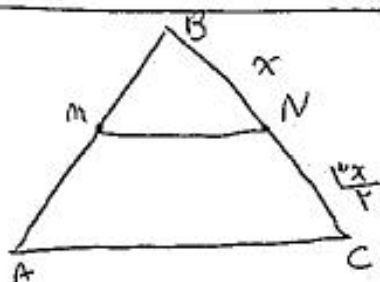
(1)

$$\omega \times V \times \frac{1}{r} \times \sin A - V \times r \times \frac{1}{r} \times \sin A = 1/2 \Delta$$

$$1/2 \Delta \sin A - 1/2 \sin A = 1/2 \Delta$$

$$\frac{1/2 \Delta \sin A}{\sin A} = 1/2 \Delta \Rightarrow \boxed{A = 1/2 \Delta} \Rightarrow \tan A = \frac{1/r}{\frac{\sqrt{r}}{r}} = \frac{1}{\sqrt{r}} = \frac{\sqrt{r}}{r}$$

$$A = 1/2 \Delta$$



$$1/2 \Delta = 1/2 \Delta$$

$$BN = \frac{1}{2} \Delta$$

(2)

$$S_{ABC} = 1/2 \Delta \sin A \Rightarrow \frac{1}{2} \Delta \sin A = \frac{1}{2} \Delta \sin A$$

$$\frac{\omega AB}{r} = 1/2 \Delta \sin A \Rightarrow \frac{\omega}{r} (Bm + Am) = 1/2 \Delta \sin A$$

$$\frac{Bm}{Am}$$

$$\frac{\omega}{\Delta}$$

$$\frac{1}{\sqrt{G \sin \alpha}} - \tan \alpha = \frac{1 + \sin \alpha}{|G \sin \alpha|} = \frac{1}{|G \sin \alpha|} - \tan \alpha = \frac{1 + \sin \alpha}{|G \sin \alpha|}$$

(1)

$$\tan \alpha = \frac{-\sin \alpha}{|G \sin \alpha|} \rightarrow G \sin \alpha < 0$$

$$\frac{|\sin \alpha|}{G \sin \alpha} = \frac{-1}{G \sin \alpha} \rightarrow \sin \alpha < 0$$

مطلوب