

آر مینا کیسلی کرره دم پنجشنبه

$$\begin{aligned} \text{الف) } & \tan\left(3\pi - \frac{\pi}{4}\right) + \sin\left(4\pi - \frac{\pi}{4}\right) \cos\left(3\pi + \frac{\pi}{4}\right) \\ &= -\tan\left(\frac{\pi}{4}\right) + \left((- \sin\left(\frac{\pi}{4}\right)) \times (-\cos\left(\frac{\pi}{4}\right))\right) = -1 + \left(-\frac{\sqrt{2}}{2} \times -\frac{\sqrt{2}}{2}\right) = -1 + \frac{1}{1} = \left(\frac{-1}{1}\right) \end{aligned}$$

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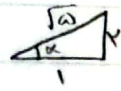
$$\begin{aligned} \text{ب) } & \tan\left(3\pi - \frac{\pi}{4}\right) \sin\left(4\pi - \frac{\pi}{4}\right) + \cos\left(3\pi + \frac{\pi}{4}\right) = -\tan\left(\frac{\pi}{4}\right) \times (-\sin\left(\frac{\pi}{4}\right)) + (-\cos\left(\frac{\pi}{4}\right)) \\ &= \frac{-1}{\sqrt{2}} \times \frac{-\sqrt{2}}{2} - \frac{1}{2} = 0 \end{aligned}$$

Parsian

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$$\frac{r \cos \theta - \sin \theta}{\cos \theta + \sin \theta} \xrightarrow{+ \sin \theta} \frac{r \cos(\theta - \frac{\pi}{4})}{\cos(\theta + \frac{\pi}{4})} = \frac{11}{5} \quad (2)$$

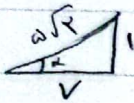
$$\sin \alpha = r \cos \alpha \rightarrow \tan \alpha = r$$



$$\rightarrow \cos \alpha = \frac{-1}{\sqrt{5}} = \frac{-\sqrt{5}}{5} \quad (3)$$



$$\begin{aligned} \cos(\frac{11\pi}{5} + \alpha) &= \cos \frac{11\pi}{5} \cos \alpha - \sin \frac{11\pi}{5} \sin \alpha \\ &= \frac{-\sqrt{5}}{5} \times \frac{-\sqrt{5}}{5} - (-\frac{\sqrt{5}}{5}) \times \frac{1}{5} = \frac{1}{5} + \frac{1}{5} = \frac{2}{5} \end{aligned}$$



$$\begin{aligned} \sin(\frac{13\pi}{5} + \alpha) &= \sin \frac{13\pi}{5} \cos \alpha + \sin \alpha \cos \frac{13\pi}{5} \\ &= \frac{-\sqrt{5}}{5} \times \frac{1}{\sqrt{5}} + \frac{1}{\sqrt{5}} \times \frac{-\sqrt{5}}{5} = \frac{-1}{5} - \frac{1}{5} = \frac{-2}{5} \end{aligned}$$

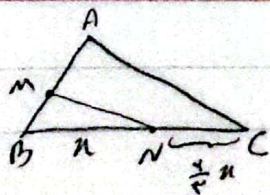
$$\begin{aligned} r \sin^2 \theta + \cos^2 \theta &= 1 + \sin^2 \theta = \frac{5}{r} \rightarrow \sin^2 \theta = \frac{1}{r} \\ \cos^2 \theta &= 1 - \frac{1}{r} = \frac{r-1}{r} \rightarrow \tan^2 \theta = \frac{1}{r-1} \end{aligned} \quad (4)$$

$$S = \frac{1}{r} \times \frac{1}{r} \times \sqrt{r} \times \sin \alpha = \frac{1}{r} \rightarrow \sin \alpha = \frac{\sqrt{r}}{r} \quad (5)$$

$$\begin{aligned} \max &\rightarrow \alpha = \frac{\pi}{2} \\ \min &\rightarrow \alpha = 0 \end{aligned} \rightarrow \frac{1}{r} \rightarrow \frac{1}{4} \quad (6)$$

$$\begin{aligned} S &= r \sin \alpha \times r \sin \alpha \times \sin \alpha = 4r \sin^3 \alpha \\ p &= r(4\sqrt{r} + 4\sqrt{r}) = 80\sqrt{r} \end{aligned} \quad (7)$$

$$\begin{aligned} \frac{1}{2} \times \omega \times V \times \sin \hat{A} &= \frac{1}{2} \times \omega \times V \times \sin \hat{A} = \frac{V}{r} \rightarrow \sin \hat{A} = \frac{V}{r} \\ &\rightarrow \sin \hat{A} = \frac{1}{r} \rightarrow \hat{A} = \frac{\pi}{2} \rightarrow \tan \hat{A} = \frac{\sqrt{r}}{r} \end{aligned} \quad (8)$$



$$\frac{1}{2} AB \times \sin \angle B = \frac{1}{2} \times BM \times \sin \angle B \quad (9)$$

$$\rightarrow \frac{AB}{BM} = r \rightarrow BM = \frac{1}{r} AB$$

$$AM = \frac{r-1}{r} AB$$

$$\rightarrow \frac{BM}{AM} = \frac{1}{r-1} \quad (10)$$

subject

Year Month Date

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$$\frac{1 + \sin \alpha}{\cos \alpha} \leq \frac{-\sin \alpha}{\cos \alpha} \rightarrow \sin \alpha < 0$$

(10)

المطلوب: $\rightarrow \frac{1}{1 + \sin \alpha} - \frac{1 + \sin \alpha}{1 + \sin \alpha} = \frac{\sin \alpha}{\cos \alpha} \rightarrow \frac{-\sin \alpha}{1 + \sin \alpha} \leq \frac{\sin \alpha}{\cos \alpha} \rightarrow \frac{-1}{1 + \sin \alpha} \leq \frac{1}{\cos \alpha}$

$$\rightarrow \cos \alpha < 0$$

(نصف دائرة)