

محرم الحرام - دهم سنه ۱۲۰۴ - طالع شمس ۱۹

$$\left. \begin{array}{l} \frac{a\pi}{n} \text{ rad } 511, 2a^\circ \checkmark \\ \frac{12d}{9} a \text{ G } 11, 2a^\circ \checkmark \end{array} \right\} \begin{array}{l} 10a + 11, 2a + 11, 2a = 110^\circ \\ \rightarrow 12a = 110 \rightarrow a = 9^\circ \checkmark \end{array}$$

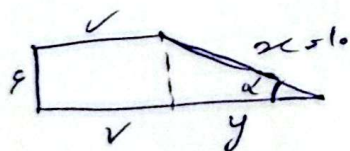
$$5 \cos 90^\circ + 15 \cdot 0 + 15 \cdot 1 \quad \checkmark$$

$$\star \tan 45^\circ = \sqrt{3}$$

$\Rightarrow \tan \alpha \leq \pm 1 \rightarrow \tan \alpha \leq 1, \Rightarrow \tan \alpha \leq 1$

$$\arctan(\sqrt{e}) = 4.0^\circ = \frac{\pi}{9} \text{ rad} \quad \checkmark$$

$$\frac{r \sin \theta - \cos \theta}{\sin \theta - r \cos \theta} \times \frac{\frac{1}{r \cos \theta}}{\frac{1}{r \cos \theta}} = \frac{\tan \theta - \frac{1}{r}}{\frac{1}{r} \tan \theta - \frac{r}{r}} = \frac{d - \frac{1}{r}}{\frac{d}{r} - \frac{r}{r}} = \frac{d - \frac{1}{r}}{\frac{1}{r}} = \boxed{1r} \checkmark$$



$$(\sin x)^\pi \approx 95 \rightarrow \frac{4}{10} x \approx 95 \rightarrow x \approx 10$$

$y' + 4y = 100 \Rightarrow y = \frac{100}{4} + C e^{-4x} = 25 + C e^{-4x}$ ✓

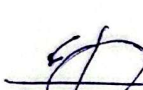
$$AB = BC = AC (\cos(40)) = 10 \left(\frac{1}{4}\right) = 2.5$$

$$DC \text{ s } BD - BC \text{ s } 10(\sin 40^\circ) - 25 \text{ s } \boxed{2\sqrt{e} - 25 \text{ s } 2(\sqrt{e} - 1)} \quad \checkmark$$

الف) $\sin \theta$ کا قوس $\rightarrow$  $\left. \begin{array}{l} \sin \theta \\ \cos \theta \end{array} \right\} \xrightarrow{\quad} \text{نقطہ} \rightarrow$  $\rightarrow$  ✓

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ب) $\sin \theta$ کا قوس $\rightarrow$  $\left. \begin{array}{l} \sin \theta \\ \cos \theta \end{array} \right\} \xrightarrow{\quad} \text{نقطہ} \rightarrow$  $\rightarrow$  ✓

$\frac{1}{\cos^2 \alpha} = 1 + \left(\frac{1}{10}\right)^2 \Rightarrow \cos^2 \alpha = 0.9 \Rightarrow \sin^2 \alpha = 1 - 0.9 = 0.1$

$\Rightarrow \sin \alpha = \left(\sqrt{\frac{1}{10}}\right)$

$\Rightarrow \sin \alpha = \frac{\sqrt{10}}{10}$ ✓

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