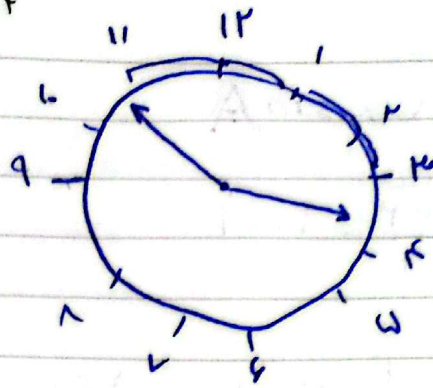


دیانادھن خواہ



۱۔ الف (ب)

$$K \times M = 12$$

$$\Delta K = 2 = 2V$$

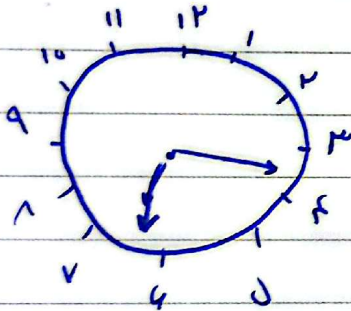
$$1 \times 4 = 4$$

$$12 + 2V + 4 = 18$$

$$\alpha = |5, \Delta M - 3 \cdot H|$$

$$\alpha = |5, 5 \times 5K - 3 \cdot x 3| = 20V$$

$$34 - 20V = 18$$



$$2 \times 3 = 6$$

$$11 \div 2 = 9$$

$$2 \times 4 = 12$$

$$9 + 12 + 9 = 11$$

۲۔ الف (ب)

$$\alpha = |3 \cdot H - 5, \Delta M| =$$

$$|3 \cdot x 4 - 5, 5 \times 11| \rightarrow |11| \rightarrow \alpha = 11$$

$$\frac{\alpha}{r} R^r \rightarrow \frac{\pi}{4} \times 10^r \rightarrow \frac{\pi}{4} \times \frac{1}{r} = \frac{\pi}{14} = \frac{\pi}{13}$$

۳۔ الف (ب)

$$\frac{\pi}{13} \times 9 = \frac{9\pi}{13} = \frac{3\pi}{4}$$

$$\alpha R + r R = \frac{\pi}{4} \times 1 + 2 \times 3 \rightarrow \frac{\pi}{4} + 4$$

(ب)

$$S = \frac{1}{2} \times AB \times BC \times \sin A$$

الف. (ب)

$$\frac{1}{2} \times 1 \times \omega \times \frac{\sqrt{3}}{2} = 1 \cdot \sqrt{3}$$

$$BC^2 = AB^2 + AC^2 - 2 \times AB \times AC \times \cos A =$$

ب. (ب)

$$BC^2 = 2\omega + 4 - 2 \times \omega \times 1 \times \frac{1}{2} = 19 - 4 = 15$$

$$BC^2 = 15$$

$$BC = \sqrt{15} \quad P = \omega + 1 + \sqrt{15} = 2$$

$$B + C = 180^\circ$$

$$BC = 10$$

$$AC = 10\sqrt{2}$$

$$A = 30^\circ = \frac{\pi}{6}$$

$$\frac{a}{\sin A} = \frac{b}{\sin B} \rightarrow \frac{10}{\sin 30^\circ} = \frac{10\sqrt{2}}{\sin B} \rightarrow B = 45^\circ = \frac{\pi}{4}$$

$$C = 105^\circ = \frac{7\pi}{12}$$

$$\tan(\pi - \alpha) = -\tan \alpha \quad 9$$

$$\tan(\pi + \alpha) = \tan \alpha$$

$$\tan(2\pi - \alpha) = -\tan \alpha$$

$$\tan(2\pi + \alpha) = \tan \alpha$$

$$(-\tan \alpha) + 3 \tan \alpha = 3 \tan \alpha \quad 11$$

$$-\tan \alpha - \tan \alpha = -3 \tan \alpha \quad 12$$

$$\Rightarrow \frac{3 \tan \alpha}{-3 \tan \alpha} = -1 \quad 13$$

$$\frac{\pi}{12} = 15^\circ \quad \alpha = \tan 15^\circ \quad 14$$

$$9 \cdot 15^\circ = 135^\circ \quad \tan\left(\frac{\pi}{4} - 15^\circ\right) = \cot 15^\circ = \frac{1}{\alpha}$$

$$10 \cdot 15^\circ = 150^\circ \quad \tan\left(\frac{\pi}{3} + 15^\circ\right) = -\cot 15^\circ = -\frac{1}{\alpha}$$

$$14 \cdot 15^\circ = 210^\circ \quad \tan(\pi - 15^\circ) = -\tan 15^\circ = -\alpha$$

$$22 \cdot 15^\circ = 330^\circ \quad \tan\left(\frac{7\pi}{6} + 15^\circ\right) = \tan 90^\circ = \frac{1}{\alpha}$$

$$\frac{3\left(\frac{1}{\alpha}\right) + \left(-\frac{1}{\alpha}\right)}{3(-\alpha) - \frac{1}{\alpha}} = \frac{\frac{1}{\alpha}}{-3\alpha - \frac{1}{\alpha}} \rightarrow \frac{1}{-3\alpha^2 - 1}$$

$$A = \sin + \cos$$

$$B = \sin - \cos$$

$$\frac{A}{B} + \frac{B}{A} = \mu$$

$$\frac{A^2 + B^2}{AB} = \mu$$

$$A^2 = \sin^2 + \cos^2 + 2\sin\cos$$

$$B^2 = \sin^2 + \cos^2 - 2\sin\cos$$

$$A^2 + B^2 = 2(\sin^2 + \cos^2) = 2$$

$$\frac{2}{\sin^2 - \cos^2} = \mu$$

$$\sin^2 - \cos^2 = \frac{2}{\mu}$$

$$\cos^2 (\tan^2 - 1) = \frac{2}{\mu}$$

$$\cos^2 = \frac{1}{1 + \tan^2}$$

$$\frac{\tan^2 - 1}{1 + \tan^2} = \frac{2}{\mu}$$

$$\tan^2 = t$$

$$\frac{t-1}{1+t} = \frac{2}{\mu} \rightarrow \mu t - \mu = 2t + 2$$

$$t = \omega$$

$$\tan^2 x = \omega$$

5 Sep. 2022

دوشنبه

۱۴۴۴ صفر ۸

$$\frac{1 - \cos^r + r \cos^r + 1}{1 - \cos^r + r \cos^r - 1} = \frac{-r \cos^r + r}{\cos^r} = -r$$

$$-r \cos^r + r = r \cos^r \quad \cos^r = \frac{r}{V}$$

$$\sin^r + \frac{r}{V} = 1 \rightarrow \sin^r = \frac{Q}{V}$$

$$\tan^r = \frac{Q}{V} \times \frac{V}{r} = \frac{Q}{r}$$

$$\cos \frac{r\omega}{p} = \cos \frac{r\omega}{p} = \frac{\sqrt{1 + \cos r\omega}}{p} = \frac{\sqrt{r + \sqrt{r}}}{p}$$

$$\sin \frac{r\omega}{p} = \sin(r\omega - \frac{r\omega}{p}) = \cos \frac{r\omega}{p} = \frac{\sqrt{r + \sqrt{r}}}{p}$$