

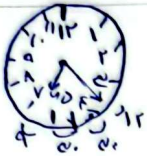
$$(3 \times 4) + 27 + 6 = 159$$

(الف)



$$|0.15M - 0.1h| = |0.15 \times 0.4 - 0.1| = 0.07 \Rightarrow 0.07 - 0.07 = 159$$

(ب)



$$0 + 0 + 12 + 9 = 11$$

(الف)

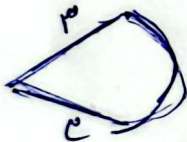
$$-11, \\ |0.15M - 0.1h| = |0.15 \times 11 - 11| = |-11| = 11$$

(ب)

$$L = \theta \times r \Rightarrow \frac{\pi}{12} \times 9 = \frac{\pi}{4}$$

$$\frac{\pi}{12} \times 9 = \frac{\pi}{4}$$

(الف)



$$L = \theta \cdot r \Rightarrow \frac{\pi}{2} \times r = \frac{\pi}{2}$$

$$P = c + c + \frac{\pi}{r} \Rightarrow 6 + \frac{\pi}{r}$$

(ب)

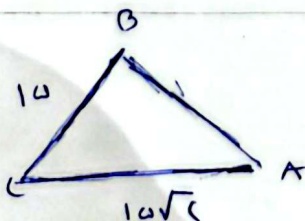
$$\frac{1}{2} ab \sin \alpha = \frac{1}{2} \times 5 \times 8 \times \frac{\sqrt{2}}{2} = 10\sqrt{2}$$

(الف)

$$c^2 = \sqrt{a^2 + b^2 - 2ab \cos \alpha} = \sqrt{9^2 + 10^2 - 18 \times \frac{1}{2}} = \sqrt{149} = 12$$

$$P = 11 + 0 + 12 = 23$$

(ب)



$$B + C = 100 \Rightarrow A = 80^\circ$$

$$\frac{\sin A}{10} = \frac{\sin B}{10\sqrt{2}} = \frac{1}{2} = \frac{\sin B}{\sqrt{2}} \Rightarrow \sin B = \frac{\sqrt{2}}{2}$$

$$B = 45 \Rightarrow 10 + C = 100 \Rightarrow C = 90$$

$$\frac{180}{100} \mid \frac{\pi}{2} \Rightarrow \frac{180\pi}{100}$$

$$\frac{-\tan \alpha + r \tan \alpha}{-\tan \alpha - \tan \alpha} = \frac{r \tan \alpha}{-r \tan \alpha} = (-1)$$

$$r \tan \left(\frac{\pi}{r} - \frac{\pi}{1r} \right) + \tan \left(\frac{\pi}{r} + \frac{\pi}{1r} \right)$$

$$r \tan \left(\pi - \frac{\pi}{1r} \right) - \tan \left(r \frac{\pi}{r} - \frac{\pi}{1r} \right)$$

$$\cancel{r \tan \frac{\pi}{1r}} * \frac{r \cot + \frac{\pi}{1r} - \cot + \frac{\pi}{1r}}{-r \tan \frac{\pi}{1r} + \cot + \frac{\pi}{1r}}$$

$$\frac{\frac{r}{a} - \frac{1}{a}}{-ra + \frac{1}{a}} = \frac{\frac{1}{a}}{-ra^2 - 1}$$

$$\left[\frac{\sin x + \cos x}{\sin x - \cos x} \times \frac{\sin x - \cos x}{\sin x + \cos x} = \frac{\sin^2 + \cos^2 + r \sin \cdot \cos + \sin^2 + \cos^2 - r \sin \cdot \cos}{\sin^2 x - \cos^2 x} \right]$$

$$\frac{r \sin^2 + r \cos^2}{\sin^2 - \cos^2} = r \Rightarrow r \sin^2 - r \cos^2 = r \sin^2 + r \cos^2$$

$$\hookrightarrow \boxed{\sin^2 = 4 \cos^2} \Rightarrow \tan^2 x = \frac{\sin^2}{\cos^2}$$

$$\frac{1 - \cos^2 x - r \cos^2 x + 1}{1 - \cos^2 x + r \cos^2 x - 1} = \frac{r - r \cos^2 x}{\cos^2 x} = r$$

$$r \cos^2 x = r - r \cos^2 x \Rightarrow 2 \cos^2 x = r \Rightarrow \cos^2 x = \frac{1}{2}$$

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

$$\cos(1510) = \frac{1 + \cos 60^\circ}{r} = \frac{1 + \frac{\sqrt{r}}{r}}{r} = \frac{r + \sqrt{r}}{r}$$

$$\sin(910) = \frac{1 - \cos 100}{r} = \frac{1 - (-\frac{\sqrt{r}}{r})}{r} = \frac{r + \sqrt{r}}{r}$$