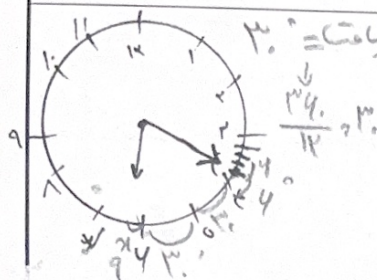


$4 \rightarrow 12$
 $4' \rightarrow 27$
 $4 \times 4 = 12$
 $4 + 12 + 27 = 123$

الف) $3:4 \rightarrow 123$

ب) $| (4 \times 4) - (3 \times 3) | = 123$



$4 \rightarrow 12$
 $4' \rightarrow 27$
 $4 + 12 + 27 = 123$

الف) $4:12 \rightarrow 123$

ب) $| (4 \times 4) - (3 \times 3) | = 123$

$S = \frac{\pi}{4} \times R^2 = \frac{\pi}{4} \times 9 = \frac{9\pi}{4}$

الف) $S = ?$

$\frac{\pi}{4} \times R^2 = \frac{\pi}{4}$

$AB = \frac{\pi}{4} \times R = \frac{\pi}{4}$

ب) $P = ?$

$S_{ABC} = \frac{1}{2} AB \times AC \times \sin 45^\circ = \frac{1}{2} \times \frac{\pi}{4} \times \frac{\pi}{4} = \frac{\pi^2}{16}$

$BC = \sqrt{4^2 + 12^2 - 2 \times 4 \times 12 \times \cos 45^\circ} = \sqrt{49} = 7$

ب) $P = ?$

$B + C = 180^\circ \Rightarrow C = 180^\circ - B$
 $\frac{BC}{\sin A} = \frac{AC}{\sin B} = \frac{AB}{\sin C}$

$\frac{12}{\sin 45^\circ} = \frac{12\sqrt{2}}{\sin B} \Rightarrow \sin B = \frac{1}{\sqrt{2}} \Rightarrow B = 45^\circ$

$\frac{12}{12} = \frac{\pi}{\pi}$

$\frac{\pi \times 12}{12} = \frac{\pi}{1}$

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

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

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

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

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

$$\frac{\pi}{18} = 10^\circ \quad \tan 10^\circ = \tan(90^\circ - 10^\circ) = \cot 10^\circ$$

$$\tan 10^\circ = a$$

$$\tan 10^\circ = \tan(90^\circ + 10^\circ) = \cot 10^\circ$$

$$\tan 10^\circ = \tan(\pi - 10^\circ) = -\tan 10^\circ$$

$$\tan r\pi = \tan(\pi + r\pi) = \tan r\pi = \cot 10^\circ$$

$$\left\{ \begin{aligned} A &= \frac{r \cot 10^\circ - \cot 10^\circ}{-r \cot 10^\circ - \cot 10^\circ} \\ \frac{1}{a} &= -1 \end{aligned} \right.$$

$$\frac{(\sin x + C \cos x)^r + (\sin x - C \cos x)^r}{\sin^2 x - C^2 \cos^2 x} = \frac{\sin^2 x - C^2 \cos^2 x}{\sin^2 x - C^2 \cos^2 x}$$

$$\frac{r(\sin^2 x + C \cos^2 x) + r \sin x \cos x - r \sin x \cos x}{\sin^2 x - C^2 \cos^2 x} = r \frac{1 - C^2 \cos^2 x}{\sin^2 x - C^2 \cos^2 x}$$

$$\sin^2 x = 1 - C^2 \cos^2 x$$

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

$$\tan^2 x = \frac{\sin^2 x}{C \cos^2 x} = \frac{\frac{a}{v}}{\frac{r}{v}} = \frac{a}{r}$$

$$\tan^2 x = \frac{a}{r} = r \cdot a$$

$$\cos\left(\frac{\pi}{4}\right) \rightarrow \sqrt{\frac{1 + \frac{r}{r}}{2}} = \frac{\sqrt{r + r}}{r}$$

$$\Leftarrow \cos(r\pi, d) \text{ (الف)}$$

$$4\pi d + 2\pi d = 9$$

$$\Rightarrow \sin(4\pi, d) \cdot \cos(r\pi, d) = \frac{\sqrt{r + r}}{r} \sin(4\pi, d) \text{ (ب)}$$