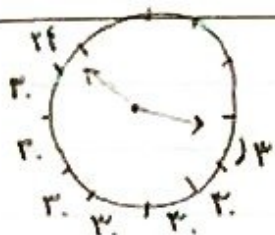


10pi-

اسم ننوشه



$$r: \Delta F' \rightarrow \frac{\Delta F}{r} = 27$$

(الف) ①

$$r - 27 = 3$$

$$\text{پس } 3 \times 4 + 27 = 20 \rightarrow 34 - 20 = 14$$

$$a = |\omega \Delta \min - r \cdot h| \rightarrow 0.5 \times \Delta F - 12 \times 12 \times 2.7$$

(ب)

$$\rightarrow 340 - 20 = 140$$

②



$$\frac{12}{r} = 9 \rightarrow$$

$$9 + 12 + 12 \times 2 = 11$$

$$\alpha = |\omega \Delta \min - r \cdot h| \rightarrow 11$$

(ب)

$$S = \frac{\alpha}{r} R^2 \rightarrow \frac{\pi}{r} \times \frac{1}{r} \times 32 \times 3 = \frac{3\pi}{r}$$

(الف) ③

$$\text{پس } \alpha R \rightarrow 3 \times \frac{\pi}{r} = \frac{\pi}{r}$$

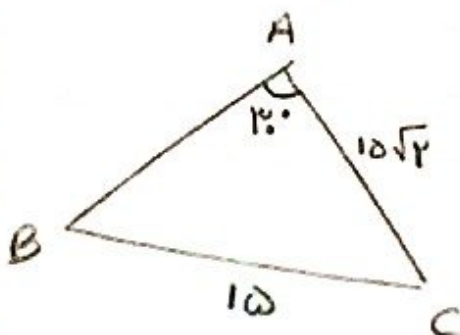
$$\frac{1}{r} = \frac{1}{r} + r$$

(ب)

$$\text{پس } S = \frac{1}{r} \times 0.2 \times \sin 45^\circ \rightarrow \frac{1}{r} \times 0.2 \times \frac{\sqrt{2}}{2} = 1.0 \sqrt{2}$$

(الف) ④

$$CB = \sqrt{0.2^2 + 1^2} \times \frac{1}{r} \times 0.2 \times \cos 45^\circ \times v \rightarrow \frac{1}{r} = v + 1 + 0 = 20$$



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

$$\rightarrow \hat{C} = 180^\circ - 135^\circ - 10^\circ = 35^\circ$$

$$100 \times \frac{\pi}{180} = \frac{\pi}{18}$$

$$\frac{10\sqrt{2}}{r} = 1 \rightarrow r = 10\sqrt{2}$$

$$\frac{\tan(\pi - \alpha) + r \tan(\pi + \alpha)}{\tan(r\pi - \alpha) - \tan(r\pi + \alpha)} = \frac{-\tan \alpha + r \tan \alpha}{-\tan \alpha - \tan \alpha} = \frac{r \tan \alpha}{-2 \tan \alpha} = -1$$

$$\frac{-\tan \alpha + r \tan \alpha}{-\tan \alpha - \tan \alpha} = \frac{r \tan \alpha}{-2 \tan \alpha} = -1$$

dn

$$\frac{\tan \frac{\pi}{18}}{\tan \frac{\pi}{18} - \tan(10^\circ)} = a \rightarrow \frac{r \tan(\frac{\pi}{r} - 10^\circ) + \tan(\frac{\pi}{r} + 10^\circ)}{r \tan(\pi - 10^\circ) - \tan(\frac{18\pi}{r} - 10^\circ)} = \quad (v)$$

$$\frac{r \cot(10^\circ) - \cot(10^\circ)}{-r \tan(10^\circ) - \cot(10^\circ)} = \frac{\cot(10^\circ)}{-r \tan(10^\circ) - \cot(10^\circ)} = \frac{\frac{1}{a}}{-ra - \frac{1}{a}} = \frac{\frac{1}{a}}{-\frac{ra^2 - 1}{a}} = \frac{1}{-ra^2 - 1} = \frac{1}{-(ra^2 + 1)}$$

$$\frac{\sin x + \cos x}{\sin x - \cos x} + \frac{\sin x - \cos x}{\sin x + \cos x} = 1 \quad (7)$$

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

$$\rightarrow \frac{r \sin^2 x + r \cos^2 x}{\sin^2 x - \cos^2 x} = \frac{r \tan^2 x + r}{\tan^2 x - 1} = 1 \rightarrow r \tan^2 x + r = \tan^2 x - 1 \rightarrow \tan^2 x = \frac{r+1}{r-1} \rightarrow \tan x = \sqrt{\frac{r+1}{r-1}}$$

$$\frac{\sin^2 x - r \cos^2 x + 1}{\sin^2 x + r \cos^2 x - 1} = f \rightarrow \frac{\sin^2 x - r \cos^2 x + 1}{\cos^2 x} = f \quad (9)$$

$$\sin^2 x = r \cos^2 x - 1 \rightarrow \sin^2 x \cdot \frac{1}{\cos^2 x} - 1 = \sin^2 x = \frac{r}{\cos^2 x} - 1$$

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

$$\tan^2 x = \frac{\sin^2 x}{\cos^2 x} = \frac{\frac{r}{\cos^2 x} - 1}{\cos^2 x} = \frac{\frac{r - \cos^2 x}{\cos^2 x}}{\cos^2 x} = \frac{r - \cos^2 x}{\cos^4 x}$$

$$\cos(rv/\omega) = \frac{1 + \cos f \omega}{r} \rightarrow \pm \sqrt{\frac{1 + \frac{\sqrt{r}}{r}}{r}} = \pm \sqrt{\frac{1 + \sqrt{r}}{r^2}} = \pm \frac{\sqrt{1 + \sqrt{r}}}{r}$$

$$\sin(rv/\omega) = \frac{1 - \cos f \omega}{r} \rightarrow \pm \sqrt{\frac{1 - \frac{\sqrt{r}}{r}}{r}} = \pm \sqrt{\frac{1 - \sqrt{r}}{r^2}} = \pm \frac{\sqrt{1 - \sqrt{r}}}{r}$$

• dot note