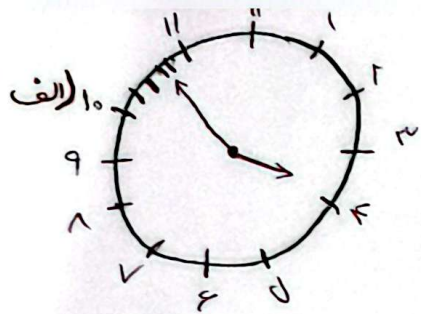


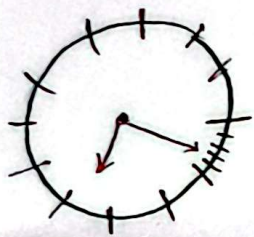


$$a = \Delta \text{ADM} - \text{م.ه} \rightarrow \Delta \text{ADM} \times \Delta \text{f} - \text{م.ه} \times \text{م} = 20.7^\circ$$

$$39^\circ - 20.7^\circ = 18.3^\circ \rightarrow$$

از فرمول

$$\angle(39^\circ) + 9^\circ + \left(\frac{0.2}{2}\right) = 120^\circ + 9^\circ + 17^\circ = 146^\circ \rightarrow$$



$$2(39^\circ) + 2(9^\circ) + \left(\frac{11}{2}\right) = 90 + 12 + 9 = 111^\circ \rightarrow$$

$$a = \Delta \text{ADM} - \text{م.ه} \rightarrow \frac{\Delta \text{ADM}}{2} \times 11 - \text{م.ه}(9) = |99 - 110| = 11^\circ \rightarrow$$

الف) $\frac{\alpha}{2} R^2 \Rightarrow \frac{\pi}{2} \times 9 = \frac{\pi}{18} \times 9 = \frac{\pi}{2}$

ب) $\frac{\pi}{2} \times 2 = \frac{\pi}{2}$ محاط = $2R + L \rightarrow 2 \times 2 + \frac{\pi}{2} = 4 + \frac{\pi}{2}$

الف) $\frac{1}{2} \times \Delta \times \sin 60^\circ = \Delta \times \frac{\sqrt{3}}{2} = 10\sqrt{3}$ [مربع کعبه ها]

ب) $CB^2 = 9^2 + 12^2 + 2(9 \times 12) = CB^2 = 225 \rightarrow CB = 15 \rightarrow P = V + A + D = 20$

$\hat{A} = 110^\circ \xrightarrow{B+C=180^\circ} \hat{A} = 70^\circ$ [Sin کعبه] $\frac{10}{\frac{1}{2}} = \frac{10\sqrt{3}}{\frac{1}{2}} \rightarrow \hat{B} = \frac{\sqrt{3}}{2} = 60^\circ$

$\hat{C} = 110^\circ - (70^\circ + 60^\circ) = 10^\circ \rightarrow B = \frac{60^\circ}{110^\circ} = \frac{R_{\text{rad}}}{\pi} \rightarrow R_{\text{rad}} = \frac{\pi}{2}$
 $C = \frac{10^\circ}{110^\circ} = \frac{R_{\text{rad}}}{\pi} \rightarrow R_{\text{rad}} = \frac{\sqrt{3}\pi}{12}$

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

$\frac{\frac{\pi}{12}}{\frac{\pi}{12}} = \frac{0}{110^\circ} \rightarrow D = 10^\circ$ و $r \tan(90 - 10) + \tan(90 + 10) \rightarrow$

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

$\frac{\frac{1}{a}}{-ra - \frac{1}{a}} = -\frac{1}{ra + 1}$

$$\frac{\sin^r + \cos^r + r \cos^r \sin + \sin^r + \cos^r - r \cos^r \sin}{\sin^r - \cos^r} = r \rightarrow \frac{r}{-(\cos^r \alpha)} = r$$

$$\rightarrow -\cos^r \alpha = \frac{r}{r} \rightarrow \cos^r \alpha = -\frac{r}{r} = \frac{1 - \tan^r}{1 + \tan^r} \Rightarrow -r + r \tan^r = r - r \tan^r$$

$$\rightarrow \boxed{\alpha = \tan^r}$$

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

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

$$\text{و) } \cos(45^\circ) = \cos^r 45 = \frac{1 + \cos^r 45}{r} \Rightarrow \frac{1 + \frac{r}{r}}{r} = \frac{r + r}{r} \sqrt{\frac{r}{r}}$$

$$\cos 45^\circ = \frac{\sqrt{r + r}}{r}$$

$$\text{و) } \sin(45^\circ) = \sin^r = \frac{1 - \cos^r 45}{r} = \frac{1 - \frac{r}{r}}{r} \rightarrow \frac{r - r}{r} \sqrt{\frac{r}{r}}$$

$$\sin 45^\circ = \frac{\sqrt{r - r}}{r}$$