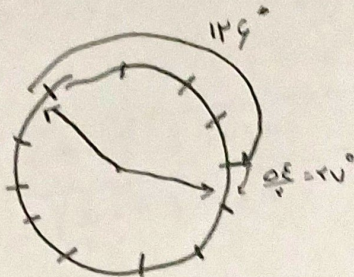


تكليف 19

3: 54'

ساعة ناقصة

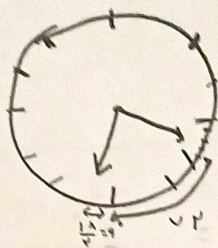


(الف - 1)
 $126^\circ + 27^\circ = 153^\circ$

$a = |5.5M - 30H| \rightarrow 5.5 \times 54 - 30 \times 3 = 27$

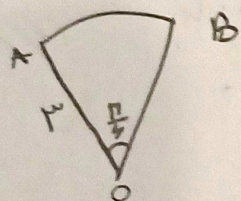
$360 - 207 = 153^\circ$ (ب)

9: 11'



(الف - 2)

$a = |5.5M - 30H| \rightarrow |5.5 \times 11 - 30 \times 9| = |-11| = 11^\circ$ (ب)

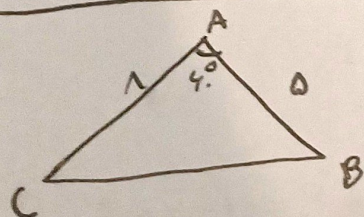


$\frac{s}{r} \times R^\circ = \frac{\pi}{12} \times 9 = \frac{3\pi}{4}$

(الف - 3)

$\widehat{AB} = r \times \frac{\pi}{2} = \frac{\pi}{2}$

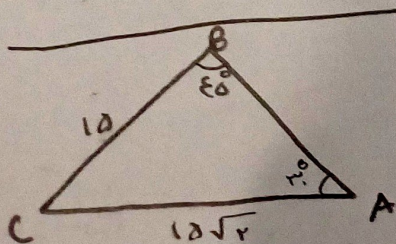
$\frac{\pi}{2} + \frac{\pi}{2} = \pi$ (ب)



$S_{ABC} = \frac{1}{2} \times 1 \times 2 \times \sin 40^\circ = 1 \times \sin 40^\circ = 1 \times \frac{\sqrt{3}}{2} = \frac{\sqrt{3}}{2}$ (الف - 4)

$CB = \sqrt{4 + 1 - 2 \times 1 \times 2 \times \cos 40^\circ} = \sqrt{5 - 4 \cos 40^\circ} = \sqrt{5} = \sqrt{5}$ (ب)

$2 + 1 + \sqrt{5} = (2 + \sqrt{5})$



$B + C = 180^\circ - 100^\circ = 80^\circ$
 $A = 100^\circ$

$\frac{10}{\sin 100^\circ} = \frac{10\sqrt{2}}{\sin B} \rightarrow \frac{10}{1} = \frac{10\sqrt{2}}{\sin B} \rightarrow \sin B = \frac{\sqrt{2}}{2}$
 $B = 45^\circ$

$C: 180 - (100 + 45) = 35^\circ \rightarrow \frac{10}{\sin 35^\circ} = \frac{R_{ad}}{\sin 35^\circ} \rightarrow R_{ad} = \frac{10 \sin 35^\circ}{\sin 35^\circ} = 10$

$\hat{B} = \frac{\pi}{4}$

$\hat{C} = \frac{7\pi}{12}$

$$\frac{\tan(n-a) + r \tan(n+a)}{\tan(rn-a) - \tan(rn+a)} = \frac{-\tan a + r \tan a}{-\tan a - \tan a} = \frac{r \tan a}{-r \tan a} = \textcircled{-1} \quad -r$$

$$\frac{r \tan 0^\circ + \tan 1.0^\circ}{r \tan 170^\circ - \tan 170^\circ} = \frac{r \tan(\frac{\pi}{2} - a) + \tan(\frac{\pi}{2} + a)}{r \tan(n-a) - \tan(\frac{r\pi}{r} - a)} = \frac{r \cot a + (-\cot a)}{-r \tan - \cot a} \quad -r$$

$$\tan \frac{\pi}{r} = a$$

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

$$\frac{-\cot^r a}{r + \cot^r a} =$$

$$\frac{\cot a}{-\frac{r}{\cot a} - \cot a} = \frac{\cot a}{\frac{r - \cot^2 a}{\cot a}} = \frac{\cot^r a}{-r - \cot^r a} =$$

$$\frac{\sin n + \cos n}{\sin n - \cos n} + \frac{\sin n - \cos n}{\sin n + \cos n} = \frac{\sin^r n + r \sin n \cos n + \cos^r n + \sin^r n - r \sin n \cos n}{(\sin n + \cos n)(\sin n - \cos n)} \quad -1$$

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

$$\Delta \cos^r n = \sin^r n$$

$$\tan^r n = \frac{\sin^r n}{\cos^r n} \Rightarrow \frac{\Delta \cos^r n}{\cos^r n} = \textcircled{\Delta}$$

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

$$\frac{1 - \cos^r n - r \cos^r n + 1}{1 - \cos^r n + r \cos^r n - 1} = \xi \quad -9$$

$$r - r \cos^r n = \xi \cos^r n$$

$$r = \xi \cos^r n \rightarrow \cos^r n = \frac{r}{\xi}$$

$$\frac{1}{\cos^r n} = 1 + \tan^r n \rightarrow \frac{\xi}{r} = 1 + \tan^r n$$

$$\tan^r n = \frac{\xi}{r}$$

$$\cos(\frac{\theta}{r}) \rightarrow \sqrt{\frac{1 + \cos \theta}{r}}$$

$$\theta = \pi^\circ \rightarrow \sqrt{\frac{1 + \frac{\sqrt{r}}{r}}{r}} \rightarrow \sqrt{\frac{r + \sqrt{r}}{r^2}} \rightarrow \frac{\sqrt{r + \sqrt{r}}}{r}$$

(cos) - 1.

$$\sin(\frac{\theta}{r}) \rightarrow \sqrt{\frac{1 - \cos \theta}{r}}$$

$$\theta = 180^\circ \rightarrow \sqrt{\frac{1 - (-\frac{\sqrt{r}}{r})}{r}} \rightarrow \sqrt{\frac{1 + \frac{\sqrt{r}}{r}}{r}} \rightarrow \sqrt{\frac{r + \sqrt{r}}{r^2}} \rightarrow \frac{\sqrt{r + \sqrt{r}}}{r}$$

(sin)