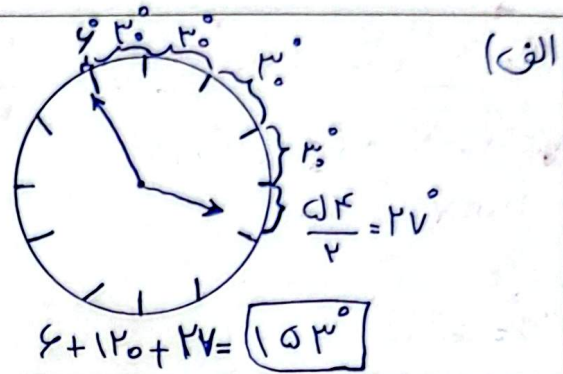
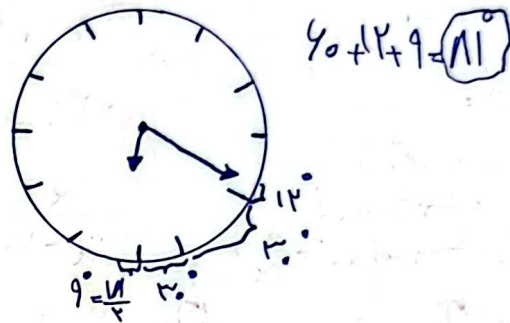


$$|5,4m - 30h| = \left| \left(\frac{55}{10} \times 4 \right) - (30 \times 3) \right| = 153^\circ$$



$$|11 \times 0,4 - (30 \times 2)| = 11^\circ$$



$$P_{ADO} = \widehat{AB} + \widehat{AO} + \widehat{BO} \Rightarrow$$

$$|AB| = \alpha r = \frac{\pi}{2} \times r = \left(\frac{\pi}{2} \right) \Rightarrow$$

$$P_{ABO} = \frac{\pi}{2} + r + r = 4 + \frac{\pi}{2}$$

(ب)

$$S_{ABO} = \frac{\alpha r^2}{2} \Rightarrow$$

$$S_{ABO} = \frac{\frac{\pi}{2} \times (r^2)}{2} = \left(\frac{\pi r^2}{4} \right)$$

(الف)

$$P_{ABC} = AC + AB + BC \Rightarrow$$

$$AC = 1$$

$$AB = 1$$

$$BC = \sqrt{(1)^2 + (1)^2 - 1 \times 1 \times \cos 90^\circ} = \sqrt{2} = \sqrt{2}$$

$$P_{ABC} = 1 + 1 + \sqrt{2} = (2 + \sqrt{2})$$

(ب)

$$S_{ABC} = AB \times AC \times \sin A \times \frac{1}{2} \Rightarrow$$

$$S_{ABC} = 1 \times 1 \times \frac{1}{2} \times \sqrt{2} = \left(\frac{\sqrt{2}}{2} \right)$$

(الف)

$$\hat{A} = 180 - (\hat{B} + \hat{C}) = 30^\circ \xrightarrow{\text{طبق قضیه سینوس ها}} \frac{a}{\sin A} = \frac{b}{\sin B} \Rightarrow \frac{1}{\frac{1}{2}} = \frac{1 \times \sqrt{2}}{\sin B} \Rightarrow$$

$$\sin B = \frac{\sqrt{2}}{2} \Rightarrow \hat{B} = 45^\circ \Rightarrow \hat{C} = 105^\circ$$

$\hat{B} = \frac{\pi}{4}$
 $\hat{C} = \frac{7\pi}{12}$

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

$$\frac{-\tan \alpha}{\tan \alpha}$$

$$\left. \begin{aligned} \tan d^\circ &= \cot l^\circ \\ \tan b^\circ &= -\cot l^\circ \\ \tan y^\circ &= -\tan l^\circ \\ \tan r d^\circ &= \cot l^\circ \\ \frac{r}{1} = 1 \Rightarrow \tan d^\circ &= \cot l^\circ \\ \frac{r}{1} = 1 \Rightarrow \cot l^\circ &= \frac{1}{\alpha} \end{aligned} \right\} \Rightarrow \frac{\cot l^\circ - \cot l^\circ}{-r \tan d^\circ - \cot l^\circ} = \frac{\cot l^\circ}{-r \tan d^\circ - \cot l^\circ}$$

$$\frac{\frac{1}{\alpha}}{-\frac{1}{\alpha} - r \alpha} = \frac{\frac{1}{\alpha}}{\frac{-1 - r \alpha^2}{\alpha}} = \frac{1}{-r \alpha^2 - 1}$$

$$\frac{\sin^r u + \cos^r u + \sin^r u \cos^r u - \sin^r u \cos^r u}{\sin^r u - \cos^r u} = \frac{r}{\sin^r u - (1 - \sin^r u)} = r \Rightarrow$$

$$\frac{r}{r \sin^r u - 1} = r \Rightarrow r = r \sin^r u - r \Rightarrow \sin^r u = \frac{1}{r} \Rightarrow$$

$$\sin^r u + \cos^r u = 1 \Rightarrow \cos^r u = \frac{1}{r} \Rightarrow \tan^r u = \frac{\sin^r u}{\cos^r u} = \frac{\frac{1}{r}}{\frac{1}{r}} = 1$$

$$\frac{\sin^r u - r(1 - \sin^r u) + 1}{\sin^r u + r(1 - \sin^r u) - 1} = \frac{\sin^r u - r + 1 + r \sin^r u}{\sin^r u + r - r \sin^r u - 1} = \frac{r \sin^r u - 1}{- \sin^r u + 1} = r \Rightarrow$$

$$r \sin^r u - 1 = r \sin^r u + r \Rightarrow r \sin^r u = 1 \Rightarrow \sin^r u = \frac{1}{r} \Rightarrow \cos^r u = \frac{r}{r} = 1$$

$$\tan^r u = \frac{\sin^r u}{\cos^r u} = \frac{\frac{1}{r}}{\frac{r}{r}} = \frac{1}{r}$$

$$\sin^r(\phi, d) = \frac{1 - \cos(\phi, d)}{r} = \frac{1 - (-\frac{\sqrt{r}}{r})}{r} = \frac{1 + \frac{\sqrt{r}}{r}}{r} \Rightarrow \sin(\phi, d) = \frac{\sqrt{r+1}}{r}$$

$$\cos^r(\phi, d) = \frac{1 + \cos(\phi, d)}{r} = \frac{1 + \frac{\sqrt{r}}{r}}{r} = \frac{r + \sqrt{r}}{r} \Rightarrow \cos(\phi, d) = \frac{\sqrt{r+1}}{r}$$