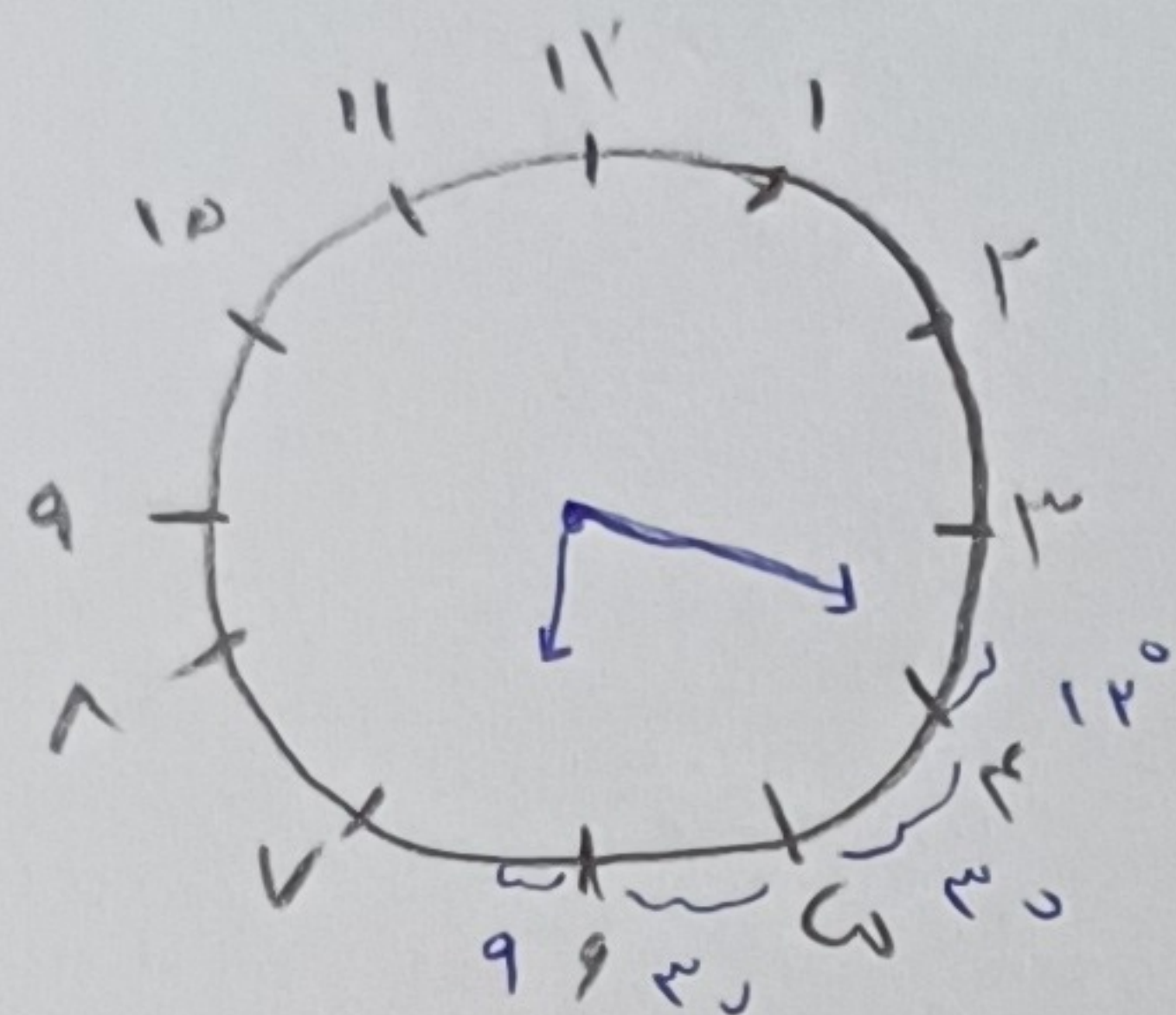
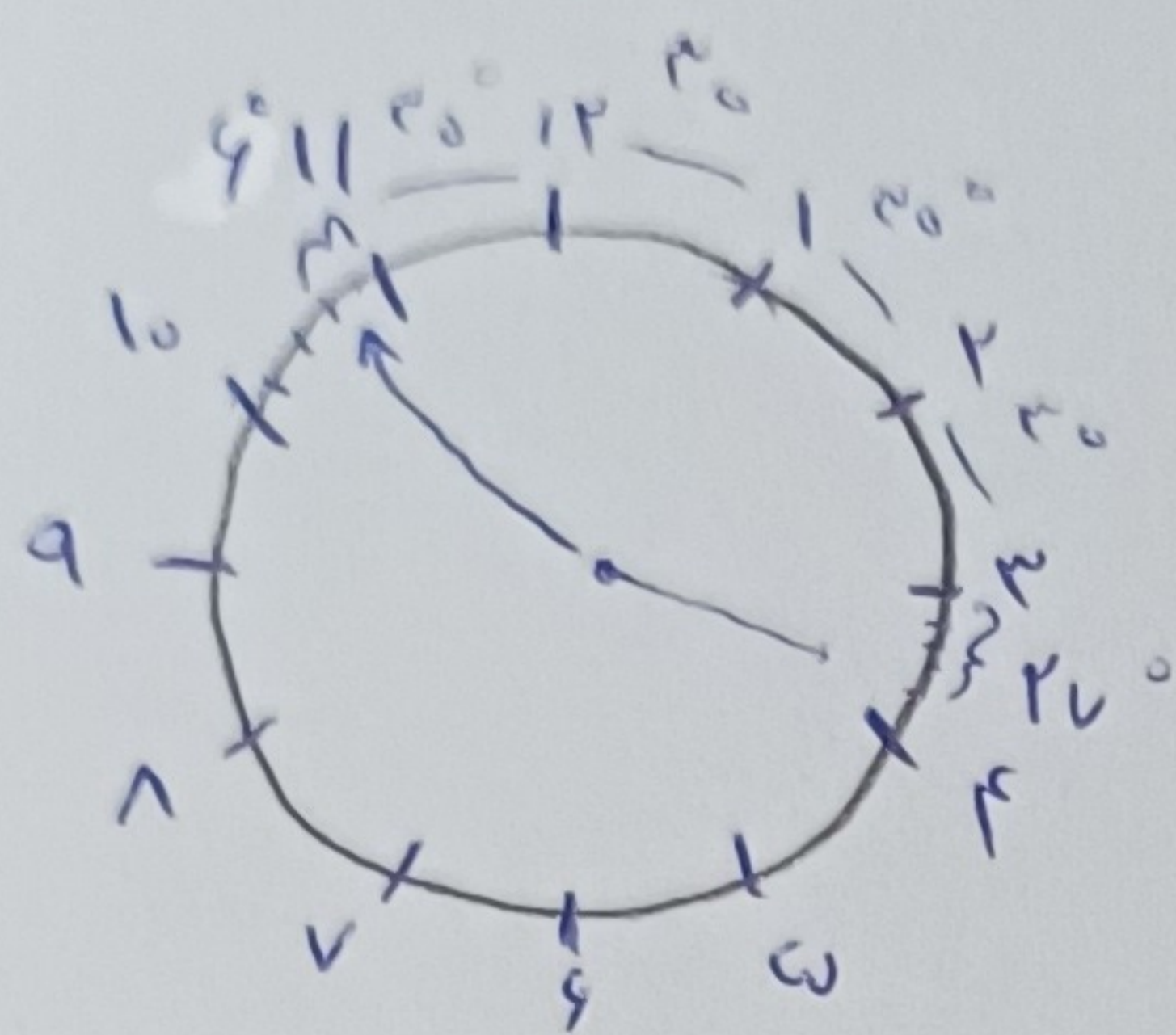


اهم دفر



$$\frac{\omega^2}{2} = 27^\circ \text{ - حالت سار}$$

$$129 + 27 = 156^\circ \text{ ان}$$

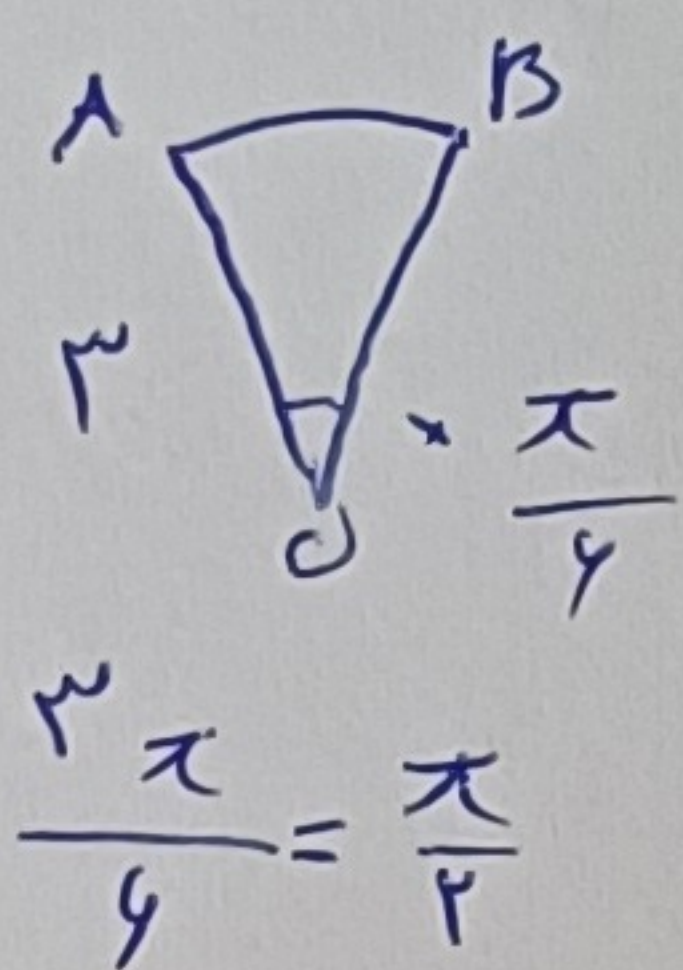
$$|\omega, \omega M - \omega h| = |\omega, \omega \times \omega| - \omega(31) = 207^\circ$$

حالت سار

$$\frac{18}{2} = 9$$

$$90 + 12 + 9 = 111^\circ$$

$$|\omega, \omega M - \omega h| = |\omega, \omega(18) - \omega(9)| = |-11| = 11^\circ$$



$$S = \frac{\pi}{2} r^2 = \frac{\pi}{2} \times 3^2 = \frac{\pi}{2} \times 9 = \frac{9\pi}{2} \text{ ان}$$

$$P = 2r + L = 2(3) + \frac{\pi}{2} = 6 + \frac{\pi}{2} = \frac{12 + \pi}{2}$$

$$\frac{1\omega}{\sin 30} = 30$$

$$30 = \frac{1\omega\sqrt{2}}{\sin B} \rightarrow \sin B = \frac{1\omega\sqrt{2}}{30} \rightarrow \sin B = \frac{\sqrt{2}}{3}$$

$$B \rightarrow 40^\circ$$

$$C + \omega = 180 \rightarrow C = 100^\circ$$

$$\frac{1}{2} \times \omega \times 1 \times \sin 60^\circ = 10\sqrt{3}$$

$$C = \sqrt{1^2 + \omega^2 - 2(1)(\omega) \times \frac{1}{2}} = \sqrt{29} \text{ طول سغارت}$$

$$P = 1 + 1 + \omega = 20$$

$$\frac{\tan(\pi - \alpha) + \tan(\pi + \alpha)}{\tan(\pi - \alpha) - \tan(\pi + \alpha)} = \frac{-\tan \alpha + \tan \alpha}{-\tan \alpha - (-\tan \alpha)} = \frac{0}{0} = -1$$

$$\frac{\pi}{12} \times \frac{180}{\pi} = 15^\circ - \tan 15^\circ = A$$

$$A = \frac{\tan 15^\circ + \tan 10^\circ}{\tan 15^\circ - \tan 10^\circ} = \frac{\tan(15^\circ + 10^\circ) + \tan(15^\circ - 10^\circ)}{\tan 15^\circ - \tan 10^\circ}$$

$$\frac{\tan(\frac{\pi}{12} - 10^\circ) + \tan(\frac{\pi}{12} + 10^\circ)}{\tan(\frac{\pi}{12} - 10^\circ) - \tan(\frac{\pi}{12} + 10^\circ)}$$

$$\frac{\tan(\frac{\pi}{12} - 10^\circ) + \tan(\frac{\pi}{12} + 10^\circ)}{\tan(\frac{\pi}{12} - 10^\circ) - \tan(\frac{\pi}{12} + 10^\circ)}$$

$$\frac{\cot 10^\circ - \cot 15^\circ}{-\cot 10^\circ - \cot 15^\circ}$$

$$\frac{\tan(15^\circ - 10^\circ) - \tan(15^\circ + 10^\circ)}{\tan(15^\circ - 10^\circ) + \tan(15^\circ + 10^\circ)}$$

$$\frac{\frac{1}{a} - \frac{1}{a}}{-\frac{1}{a} - \frac{1}{a}} = \frac{0}{-\frac{2}{a}} = 0$$

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

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

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

$$\tan^2 x = \frac{1 - \cos^2 x}{1 + \cos^2 x} = \frac{1 - (-\frac{1}{2})}{1 + (-\frac{1}{2})} = \frac{\frac{3}{2}}{\frac{1}{2}} = 3$$

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

$$r \cos^2 x = -r \cos^2 x + r \rightarrow r \cos^2 x = r \rightarrow \cos^2 x = \frac{r}{r} \quad 1 + \tan^2 x = \frac{1}{\frac{r}{r}} = \frac{r}{r} - 1 = \frac{0}{r}$$

$$\tan^2 x = \frac{0}{r}$$

الف , $\cos(2\theta, \omega^0) \rightarrow \cos^2 \theta = \frac{1 + \cos 2\theta}{2} \rightarrow \cos^2 \theta, \omega^0 = \frac{1 + \cos 2\theta}{2}$

$$\cos^2 \theta, \omega = \frac{1 + \frac{\sqrt{r}}{r}}{2} = \frac{r + \sqrt{r}}{2r} = \frac{r + \sqrt{r}}{r} \rightarrow \cos^2 \theta, \omega = \frac{r + \sqrt{r}}{r} \rightarrow \cos \theta, \omega = \pm \frac{\sqrt{r + \sqrt{r}}}{r}$$

(ب) $\cos \theta, \omega$

— , $\sin(4\theta, \omega^0) \rightarrow \sin^2 \theta = \frac{1 - \cos 2\theta}{2} \rightarrow \sin^2 4\theta, \omega = \frac{1 - \cos 12\theta}{2} = \frac{1 - (-\frac{\sqrt{r}}{r})}{2} = \frac{r + \sqrt{r}}{2r} \rightarrow$

$$\sin^2 \theta = \frac{r + \sqrt{r}}{2r} \rightarrow \sin 4\theta, \omega = \pm \frac{\sqrt{r + \sqrt{r}}}{r}$$

(ب) $\sin \theta, \omega$

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