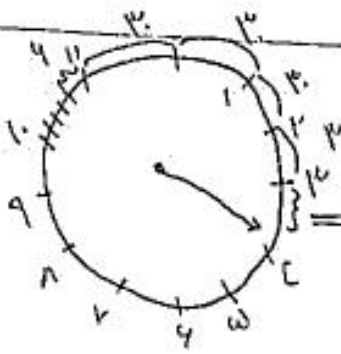




$$\Rightarrow 12 \times 10 + 27 + 9 = 150^\circ$$

$$3:54'$$

(الف 1)

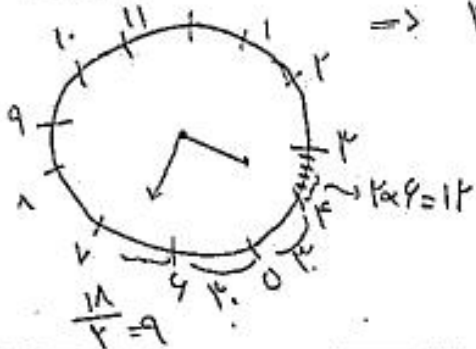
(ب 1, 75)

$$\Rightarrow \frac{150}{1} = 27$$

$$|0,0 \text{ min} - 2,0 \text{ h}| =$$

$$297 - 90 = 207^\circ$$

زاویه باید کمتر از 180° اعظم شود $\leftarrow 32^\circ - 207^\circ = 15^\circ$



$$\Rightarrow 12 \times 10 + 12 + 9 = 11^\circ$$

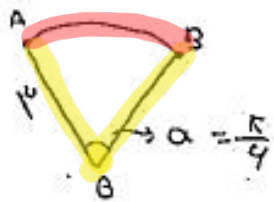
$$4:11'$$

(الف 2)

(ب 1)

$$|0,0 \text{ min} - 2,0 \text{ h}| =$$

$$|99 - 110| = 11'$$



$$S = \frac{a}{r} R^2 = \frac{\pi}{4} \times 9$$

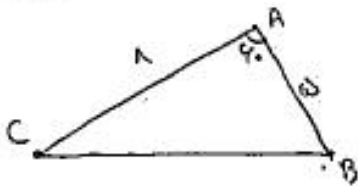
(الف) مساحت :

$$AB = aR$$

$$\frac{\pi}{4} \times 9 = \frac{\pi}{4}$$

(ب 1, 75)

$$مساحت = 3 + 2 + \frac{\pi}{4} = 4 + \frac{\pi}{4}$$



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

(الف 2)

$$BC = \sqrt{1^2 + 1^2 - 2 \times 1 \times 1 \times \cos 60^\circ}$$

$$\frac{1}{2} = 1 + 1 + 1 = 3$$

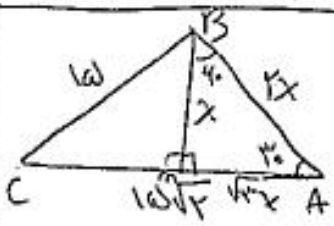
$$B = \sqrt{49} = 7$$

$$B + C = 180^\circ \Rightarrow A = 100^\circ$$

$$AC = 10\sqrt{2}$$

$$BC = 10$$

$$B + C = 180^\circ$$

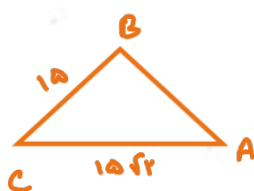


$$\sin 2 = 10\sqrt{2} - 10\sqrt{2}$$

$$10\sqrt{2} = 10\sqrt{2} + (10\sqrt{2} - 10\sqrt{2})^2$$

$$10\sqrt{2} = 10\sqrt{2} + 100 + 10\sqrt{2} - 10\sqrt{2}$$

$$0 = 10\sqrt{2} + 100 - 10\sqrt{2} \Rightarrow ?$$



$$A = 180^\circ - (B + C) = 10^\circ$$

مقدار تغییرات

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

$$\sin B = \frac{10\sqrt{2} \times 1}{10} = \sqrt{2} \rightarrow B = 45^\circ \rightarrow \hat{B} = \frac{\pi}{4}$$

$$\hat{C} = 180^\circ - (45^\circ + 10^\circ) = 125^\circ \rightarrow \hat{C} = \frac{5\pi}{4}$$

$$\frac{-\tan(\pi-a) + r \tan(\pi+a)}{\tan(\pi-a) - \tan(\pi+a)} = \frac{-\tan + r \tan}{-\tan - \tan} = \frac{r \tan}{-r \tan} = -1 \quad (9)$$

$$\frac{r \tan 180^\circ + \tan 180^\circ}{r \tan 180^\circ - \tan 180^\circ} =$$

$$\tan \frac{\pi}{1r} = a \quad (10)$$

$$\frac{\pi}{r} - \frac{\pi}{r} = 180^\circ$$

$$180 - 180 = 180$$

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

$$\frac{\sin x + \cos x}{\sin x - \cos x} + \frac{\sin x - \cos x}{\sin x + \cos x} = 10 \quad (1)$$

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

$$\frac{r \sin^{r-1} x \cos x + \cancel{\sin^r x \cos x} - \cancel{\cos^r x \sin x} - r \sin^r x \cos x}{\sin^r x - \cos^r x} = 10$$

$$\frac{\sin^{\frac{0}{r}} x - \cos^{\frac{1}{r}} x}{\sin^{\frac{0}{r}} x + \cos^{\frac{1}{r}} x} = \frac{r}{r} - \frac{1}{r} = \frac{1}{r}$$

$$\sin^{\frac{0}{r}} x + \sin^{\frac{1}{r}} x = \frac{r}{r}$$

$$\sin^{\frac{0}{r}} x = \frac{0}{r}$$

$$\cos^{\frac{1}{r}} x = \frac{1}{r} \Rightarrow \tan \frac{0}{r} = \frac{1}{r} \quad (10)$$

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

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

$$V \cos^r x = r$$

$$\cos^r x = \frac{r}{V}$$

$$\sin^r x = 1 - \cos^r x$$

$$\frac{0}{V} = 1 - \frac{r}{V}$$

$$\tan x = \frac{\sin x}{\cos x} = \frac{\frac{0}{V}}{\frac{r}{V}} = \frac{0}{r}$$

$$\cos(r, 0) = \frac{1 + \cos^r x}{r} = \frac{1 + \frac{r}{V}}{r} = \frac{1 + \sqrt{r}}{r} \quad (11)$$

$$\cos(r, 0) = \pm \frac{\sqrt{1+r}}{r}$$

$$\sin(4r, 0) = \frac{1 - \cos^r x}{r} = \frac{1 - \frac{r}{V}}{r} = \frac{1 - \sqrt{r}}{r} = \sin(4r, 0)$$

$$\sin(4r, 0) = \pm \frac{\sqrt{1-r}}{r}$$

$$\frac{\pi}{\kappa} = \left(\frac{\pi}{4}\right) \times \frac{1}{\kappa} = \frac{\kappa^0}{\kappa} = 1\Delta^0$$

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$$A = \frac{\kappa \tan\left(\frac{\pi}{\kappa} - 1\Delta^0\right) + \tan\left(\frac{\pi}{\kappa} + 1\Delta^0\right)}{\kappa \tan(\pi - 1\Delta^0) - \tan\left(\frac{\kappa\pi}{\kappa} - 1\Delta^0\right)} = \frac{\kappa \cot 1\Delta^0 - \cot 1\Delta^0}{-\kappa \tan 1\Delta^0 - \cot 1\Delta^0}$$

$$A = \frac{\cot 1\Delta^0}{-\kappa \tan 1\Delta^0 - \cot 1\Delta^0} \xrightarrow{\tan 1\Delta^0 = a} \frac{\frac{1}{a}}{-\kappa a - \frac{1}{a}} = \frac{-1}{\kappa a^2 + 1}$$