

$$\sin \frac{4\pi}{3} = -\frac{\sqrt{3}}{2}$$

$$\cos \frac{4\pi}{3} = -\frac{1}{2}$$

$$\sin \frac{11\pi}{6} = -\frac{1}{2}$$

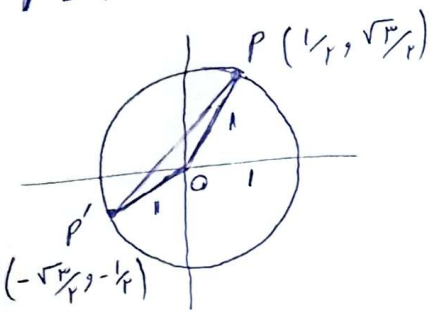
$$\cos \frac{\pi}{3} = \frac{1}{2}$$

$$\frac{+\frac{\sqrt{3}}{2}a + \frac{\sqrt{3}}{2}b}{-\frac{1}{2}a + \frac{1}{2}b} = \frac{+\frac{\sqrt{3}}{2}}{\frac{1}{2}} \rightarrow \frac{\frac{\sqrt{3}}{2}(a+b)}{\frac{1}{2}(b-a)} = \frac{\sqrt{3}}{1}$$

$$\frac{a+b}{b-a} = \frac{1}{\sqrt{3}} \quad 3a+3b=b-a \quad 4a=-2b \quad 2a=-b$$

$$\frac{b}{a} = -2$$

$P = 40^\circ$



$$PP' = \sqrt{(\frac{1}{2} + \frac{\sqrt{3}}{2})^2 + (\frac{\sqrt{3}}{2} - \frac{1}{2})^2} = \frac{1+\sqrt{3}}{2} \sqrt{2}$$

$$\underline{\text{مسافت}} = 1+1 + \frac{\sqrt{2}+\sqrt{6}}{2} = 2 + \frac{\sqrt{2}+\sqrt{6}}{2}$$

$\frac{\pi}{9} = 20^\circ$

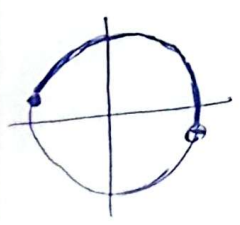
$\frac{360}{12} = 30^\circ$
زاویه بین هر ساعت

$\frac{20}{30} = \frac{2}{3} \rightarrow$ زمان طی شده $\rightarrow$ پس عمده بری دقیقه شمار ۴۰ دقیقه
افته جلور

ساعت = ۲:۴۰ ✓

$|\delta, \delta m - 2.0h| \rightarrow |\delta, \delta m - 9.0| = 2.0$
 $h = 3$

$\delta, \delta m = 11.0 \rightarrow m = 2.0$
 $\delta, \delta m = 7.0 \rightarrow m = \frac{14.0}{11}$
آرین بار
روین بار



$-\frac{1}{2} < \sin x \leq 1$

$\frac{1}{2} < m \leq 1$ ✓

$-\frac{1}{2} < \frac{m-3}{5} \leq 1$

$m = \{1, 2, 3, 4, 5, 6, 7, 8\}$ ✓

$-\frac{5}{2} < m-3 \leq 5$

$$\frac{\sin(90+10) + K \cos(170-10)}{\cos(110-10) + r \sin(110+10)} = \frac{+\cos 10 - K \sin 10}{-\cos 10 - r \sin 10} = r$$

آرکسین

-6

$$\frac{1 - K \tan 10}{-1 - r \tan 10} = \frac{1 - \frac{1}{r} K}{-1 - \frac{1}{r}} = r \quad 1 - \frac{1}{r} K = -\frac{9}{r} \quad \frac{1}{r} K = \frac{11}{r} \quad K = 11 \quad r = 22$$

$$\frac{+\cot x + \cot x}{+\tan x - r \tan x} = \frac{-\frac{1}{\sqrt{\lambda}} + \frac{1}{\sqrt{\lambda}}}{-\sqrt{\lambda} + r \sqrt{\lambda}} = \frac{-\frac{r}{\sqrt{\lambda}}}{\frac{\sqrt{\lambda}}{1}} = \frac{-r}{\lambda} = -\frac{1}{r}$$

-v

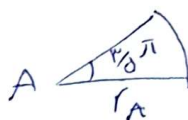
$$1 - \cos x = r + r \cos x \quad r \cos x = -1 \quad \cos x = -\frac{1}{r}$$



$$\tan x = \frac{\sqrt{\lambda}}{1}$$

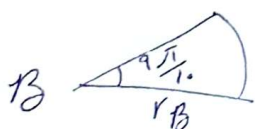
$$\cot x = \frac{1}{\sqrt{\lambda}}$$

$$\frac{D}{110} = \frac{\text{Rad}}{\pi} \quad \frac{10\pi}{110} \times \pi = \frac{r}{8} \pi$$



$$L = r \theta = \frac{r}{8} \pi r_A$$

-A

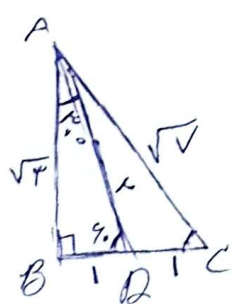


$$L = r \theta = \frac{9\pi}{10} r_B$$

$$\frac{9\pi}{10} r_B = \frac{r}{8} \pi r_A$$

$$\frac{r}{8} r_B = r_A$$

$$\frac{S_A}{S_B} = \frac{\pi r_A^2}{\pi r_B^2} = \left(\frac{r}{8}\right)^2 = \frac{9}{64}$$



$$AB^2 + 1 = r^2 \quad AB = \sqrt{r^2 - 1}$$

$$\sqrt{r^2 - 1} = \frac{\sqrt{r^2} \times BC}{r} \rightarrow BC = r \quad DC = 1$$

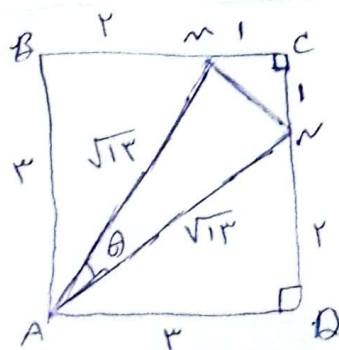
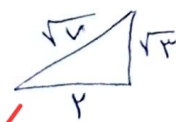
$$r^2 + 1 = AC^2 \quad AC = \sqrt{r^2 + 1}$$

$$\sqrt{r^2 - 1} = \frac{1}{r} \times r \times \sqrt{r^2 + 1} \times \sin c$$

$$\sin c = r \sin c \cos c = r \times \frac{\sqrt{r^2 - 1}}{\sqrt{r^2 + 1}} \times \frac{r}{\sqrt{r^2 + 1}} = \frac{r^2 - 1}{r^2 + 1}$$

$$\sin c = \frac{\sqrt{r^2 - 1}}{\sqrt{r^2 + 1}}$$

$$\cos c = \frac{r}{\sqrt{r^2 + 1}}$$



$$AN = \sqrt{r^2 + 9} = \sqrt{r^2 + 3^2}$$

$$S_{\triangle AMN} = r \times r = 9$$

$$S_{\triangle AMN} = 9 - \frac{r \times r}{2} - \frac{r \times r}{2} - \frac{1 \times 1}{2}$$

$$= 9 - r - r - \frac{1}{2} = \frac{9}{2}$$

$$\frac{9}{2} = \frac{1}{2} \times \sqrt{r^2 + 9} \times \sqrt{r^2 + 9} \times \sin \theta$$

$$\sin \theta = \frac{9}{r^2 + 9}$$