

تکلیف

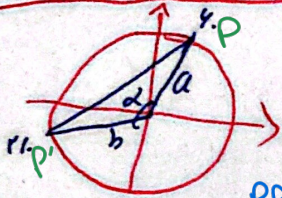
14

مسئله 14

$$-\frac{\sqrt{r}}{r}a - \frac{\sqrt{r}}{r}b$$

$$-\frac{1}{r}a = \frac{1}{r}b \Rightarrow -\frac{\sqrt{r}}{r} \Rightarrow -\frac{\sqrt{r}}{r}a - \frac{\sqrt{r}}{r}b = \frac{\sqrt{r}}{r}a - \frac{\sqrt{r}}{r}b$$

$$\Rightarrow \frac{\sqrt{r}}{r}a = -\frac{\sqrt{r}}{r}b \Rightarrow \frac{b}{a} = -1$$



$$s = \frac{1}{r}ab \sin \alpha = \frac{1}{r}a \cdot a \cdot \frac{1}{r} = \frac{1}{r}$$

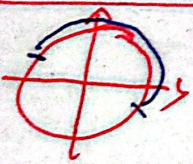
$$OP = OP' = \text{شعاع دایره مسطحه} = 1$$

$$PP' = \sqrt{1+1 - (1)(1) \cos 110 \cdot \frac{1}{r}} = \sqrt{1+1 - 2(1-\frac{\sqrt{r}}{r})} = \sqrt{2+2\sqrt{r}}$$

$$\frac{\pi}{a} = 10^\circ \Rightarrow \frac{r}{r} = \frac{r}{r} \Rightarrow \frac{r}{r} = 1 \Rightarrow r = 1$$

$$\alpha = |\partial/\partial m - r \cdot h| \Rightarrow r = |\partial/\partial m - r \cdot h| \Rightarrow \begin{cases} \partial/\partial m = 1 \Rightarrow m = r \\ r = \partial/\partial m = 1 \Rightarrow m = r \end{cases}$$

$$\Rightarrow r = 1 \Rightarrow \text{مستقیم}$$



$$-\frac{1}{r} |\sin \alpha| \Rightarrow \frac{1}{r} \frac{m-r}{r} \Rightarrow \text{مستقیم}$$

$$\Rightarrow m \in [\frac{1}{r}, 1]$$

$$\sin(180^\circ - \theta) = \sin \theta, \cos(180^\circ - \theta) = -\sin \theta, \cos(180^\circ - \theta) = -\cos \theta, \sin(180^\circ - \theta) = -\sin \theta$$

$$\Rightarrow \frac{\cos 10^\circ - k \sin 10^\circ}{-\cos 10^\circ + \sin 10^\circ} \xrightarrow{\div \cos} \frac{1 - \frac{k}{r}}{-1 + \frac{1}{r}} = 1 \Rightarrow \frac{k}{r} = 1 \Rightarrow k = r$$

$$\cos(n) = \frac{1}{r} \Rightarrow \sin(n) = \frac{\sqrt{r}}{r}, \tan(\frac{\pi}{2} - n) = \cot n, \cot(\frac{\pi}{2} - n) = -\cot n$$

$$\Rightarrow \frac{\cot n}{-\cot n} = -\frac{1}{r}$$



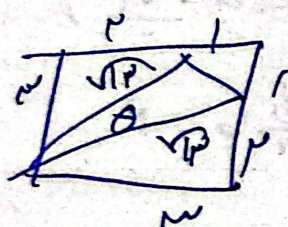
$$L = \alpha r$$

$$2A = LB \rightarrow \frac{1 \cdot 1 \pi}{1 \cdot 1} \times r_A = \frac{4 \pi}{1} \times r_B \rightarrow r_A = \frac{4}{r} r_B$$

$$\frac{S_A}{S_B} = (\frac{r_A}{r_B})^2 = \frac{4}{r}$$

$$AB = \sqrt{r} \Rightarrow \sqrt{r} = \sqrt{r} \sin \alpha \Rightarrow BC = r \Rightarrow AC = \sqrt{r} \quad (9)$$

$$\Rightarrow \sin \alpha = \frac{r}{\sqrt{r}} \Rightarrow \sin \alpha = \frac{1}{\sqrt{r}} \Rightarrow \alpha = \arcsin \left(\frac{1}{\sqrt{r}} \right) \quad (10)$$



$$\Rightarrow \sin \alpha = \frac{1}{\sqrt{r}} \Rightarrow \alpha = \arcsin \left(\frac{1}{\sqrt{r}} \right)$$

$$\Rightarrow \alpha = \arcsin \left(\frac{1}{\sqrt{r}} \right) \Rightarrow \sin \alpha = \frac{1}{\sqrt{r}} \quad (11)$$