

14

بررسی اینج

$$a \times \left(-\frac{\sqrt{r}}{r}\right) + b \times \left(-\frac{\sqrt{r}}{r}\right)$$

$$-\frac{\sqrt{r}}{r} (a+b)$$

$$= -\frac{\sqrt{r}}{r}$$

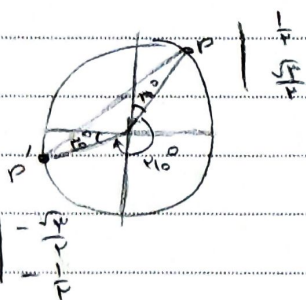
$$= -\frac{\sqrt{r}}{r}$$

$$a \times \left(-\frac{1}{r}\right) + b \times \frac{1}{r}$$

$$-\frac{1}{r} (a-b)$$

$$\Rightarrow +\sqrt{r} \times \frac{a+b}{a-b} = -\frac{\sqrt{r}}{r} \Rightarrow \frac{a+b}{a-b} = -\frac{1}{r} \Rightarrow a-b = r(a+b) \Rightarrow ra = -rb \Rightarrow \frac{b}{a} = -\frac{r}{r}$$

$$\frac{\sqrt{r}(a+b)}{(a-b)} = -\frac{\sqrt{r}}{r} \rightarrow ra + rb = b-a \rightarrow ra = -rb \rightarrow \frac{b}{a} = -\frac{r}{r}$$



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

$$= \sqrt{\left(\frac{1+\sqrt{r}}{r}\right)^2 + \left(\frac{1+\sqrt{r}}{r}\right)^2} = \sqrt{\frac{1+r+2\sqrt{r}}{r} + \frac{1+r+2\sqrt{r}}{r}}$$

$$= \sqrt{\frac{2+2\sqrt{r}}{r}} = \sqrt{2+\sqrt{r}}$$

$$r = 1+1 + \sqrt{2+\sqrt{r}} = 2 + \sqrt{2+\sqrt{r}}$$

$$\frac{D}{120} = \frac{A}{r} \Rightarrow \frac{D}{120} = \frac{1}{r} \Rightarrow D = 120^\circ \Rightarrow \text{فصل دایره} = r \times 120 = 120r$$

$$\Rightarrow r \times 120r$$

$$x = \left| \frac{11M}{r} - 120r \right| \Rightarrow 120 = \left| \frac{11M}{r} - 120r \right| \Rightarrow \frac{11M}{r} = 120 + 120r \Rightarrow M = 120r$$

$$\frac{11M}{r} = 120 - 120r \Rightarrow M = 120r$$



$$-\frac{1}{r} < \sin M < 1 \Rightarrow -\frac{1}{r} < \frac{m-r}{r} < 1 \Rightarrow -\frac{1}{r} < m-r < r$$

$$-\frac{1}{r} < m < r$$

$$\sin\left(\frac{\pi}{4} + 10^\circ\right) + K \cos\left(\frac{\pi}{4} - 10^\circ\right) = \cos 10^\circ + K(-\sin 10^\circ)$$

$$\cos(\pi - 10^\circ) + K \sin(\pi + 10^\circ) = -\cos 10^\circ + K(-\sin 10^\circ)$$

$$\frac{\div \cos}{-1 + K(-\tan 10^\circ)} = \frac{1 - 0.1736K}{-1 - 0.1736} = K \rightarrow 1 - 0.1736K = -1 - 0.1736$$

$$0.1736K = 2.1736 \rightarrow K = 12.5$$

$$\frac{\cot \alpha - (-\cot \alpha)}{\tan \alpha + K(-\tan \alpha)} = \frac{K \cot \alpha}{-\tan \alpha} = K \left(-\frac{\sqrt{3}}{1}\right) = \frac{-K\sqrt{3}}{1} = -\frac{K}{\sqrt{3}} = -\frac{1}{\sqrt{3}}$$

$$1 - \cos \alpha = K + K \cos \alpha \rightarrow -1 = K \cos \alpha \rightarrow \cos \alpha = -\frac{1}{K}$$

$$\sin^2 \alpha + \cos^2 \alpha = 1$$

$$\sin^2 \alpha = 1 - \cos^2 \alpha = 1 - \frac{1}{K^2} = \frac{K^2 - 1}{K^2}$$

$$\sin \alpha = \pm \frac{\sqrt{K^2 - 1}}{K}$$

$$\cot \alpha = \frac{-1}{\sqrt{3}} = -\frac{1}{\sqrt{3}} = -\frac{\sqrt{3}}{3}$$

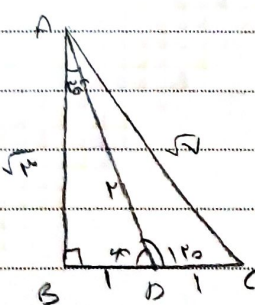
$$\tan \alpha = \frac{\frac{\sqrt{3}}{3}}{-\frac{1}{\sqrt{3}}} = -\sqrt{3}$$

$$\frac{10\pi}{180} = \frac{K}{\pi} \rightarrow K = \frac{10\pi}{\pi}$$

$$r_A \times \frac{10\pi}{\pi} = r_B \times \frac{9\pi}{10} \rightarrow \frac{r_A}{r_B} = \frac{\frac{9\pi}{10}}{\frac{10\pi}{\pi}} = \frac{9}{100}$$

$$\frac{S_A}{S_B} = \left(\frac{r_A}{r_B}\right)^2 = \left(\frac{9}{100}\right)^2 = \frac{81}{10000}$$

$$= \frac{K}{K}$$



$$AD^2 = AB^2 + BD^2 = 3 + 1 = 4 \Rightarrow AD = 2$$

$$AB = \sqrt{3^2 - 1^2} = \sqrt{8} = 2\sqrt{2}$$

$$\frac{1}{2} \times \sqrt{3} \times BC = \sqrt{3} \Rightarrow BC = 2 \Rightarrow DC = 1$$

$$AC = \sqrt{(\sqrt{3})^2 + 2^2} = \sqrt{7}$$

$$\frac{A}{\sin \alpha} = \frac{C}{\sin C} \rightarrow \frac{\sqrt{7}}{1} = \frac{\sqrt{3}}{\sin C} \Rightarrow \sin C = \frac{\sqrt{3}}{\sqrt{7}}$$

$$\cos C = \frac{1}{\sqrt{7}} = \frac{\sqrt{7}}{7}$$

$$\sin C = \frac{K \sin \alpha}{r} = \frac{K \sqrt{3}}{r} \times \frac{r \sqrt{7}}{K} = \frac{\sqrt{3}}{\sqrt{7}}$$

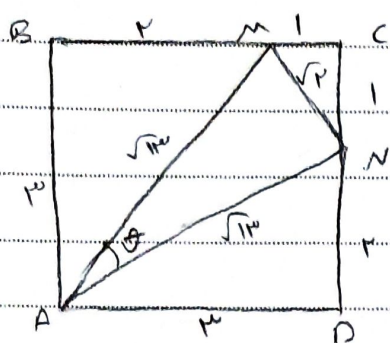
Arman

Subject:

Year: Month: Day:

درس ابراهیم

page: ()



$$AM = AN = \sqrt{13^2 + 12^2} = \sqrt{149}$$

10

$$\cos \theta = \frac{13^2 + 13^2 - 1}{24} = \frac{24}{24} = \frac{12}{13}$$

$$\sin^2 \theta = 1 - \cos^2 \theta = 1 - \frac{144}{149} = \frac{5}{149} \Rightarrow \sin \theta = \frac{\sqrt{5}}{\sqrt{149}}$$

✓

✓

10

15

12

20