

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

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

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

$P(\frac{1}{r}, y) \rightarrow \frac{1}{r} + y^2 = 1 \rightarrow y^2 = 1 - \frac{1}{r^2} \rightarrow y = \pm \frac{\sqrt{r^2-1}}{r}$

$\rightarrow y_0 + y_1 = 2y_0 \rightarrow P'(0, -1)$

$PP' = \sqrt{(\frac{1}{r}-0)^2 + (\frac{\sqrt{r^2-1}}{r}-(-1))^2} = \sqrt{\frac{1}{r^2} + \frac{r^2-1}{r^2} + \frac{2(r^2-1)}{r}} = \sqrt{\frac{r^2-1}{r^2} + \frac{2(r^2-1)}{r}} = \sqrt{\frac{r^2-1}{r^2} + \frac{2(r^2-1)}{r}}$

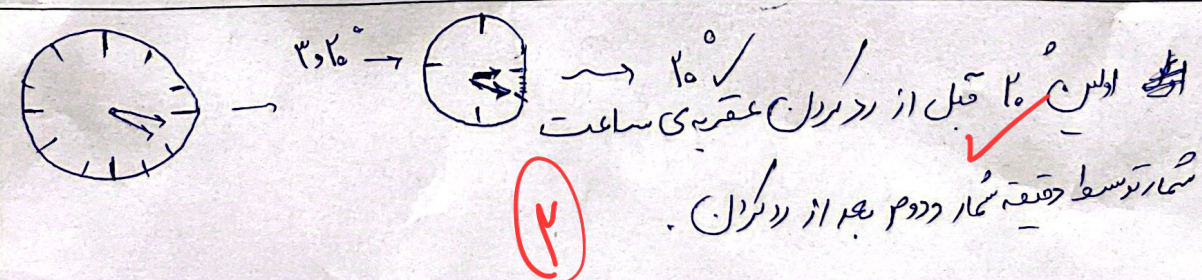
$OP = \sqrt{\frac{1}{r^2} + \frac{r^2-1}{r^2}} = \sqrt{\frac{r^2-1}{r^2}} = \frac{\sqrt{r^2-1}}{r}$

$PP' = \sqrt{(\frac{1}{r}-0)^2 + (\frac{\sqrt{r^2-1}}{r}-(-1))^2} = \sqrt{\frac{1}{r^2} + \frac{r^2-1}{r^2} + \frac{2(r^2-1)}{r}} = \sqrt{\frac{r^2-1}{r^2} + \frac{2(r^2-1)}{r}}$

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

$\frac{\pi}{9} = 20^\circ \rightarrow \frac{\text{مساحت}}{\text{مساحت}} = \frac{20^\circ}{360^\circ} \rightarrow \frac{1}{18}$

مساحت: $\frac{1}{18}$



$180^\circ \rightarrow \frac{1}{r} \sin \alpha \rightarrow \frac{1}{r} \sin \frac{m-3}{a} \rightarrow \frac{1}{r} \sin \frac{m-3}{a}$

$\frac{1}{r} \sin \frac{m-3}{a} \rightarrow \frac{1}{r} \sin \frac{m-3}{a}$

$\frac{1}{r} \sin \frac{m-3}{a}$

