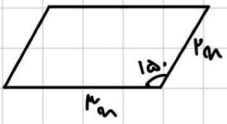


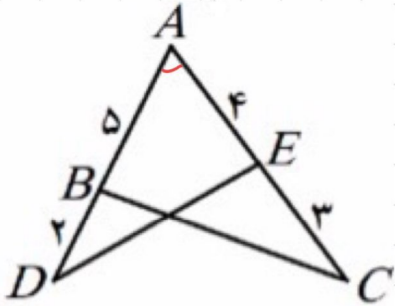
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$$S = \frac{1}{2} ab \sin \alpha \Rightarrow \frac{1}{2} \cdot 4\sqrt{2} \cdot 9\sqrt{2} = 2K \Rightarrow 4\sqrt{2} \cdot 9\sqrt{2} = 4K \Rightarrow 72 = 4K \Rightarrow K = 18$$

$$P = 2(4\sqrt{2} + 9\sqrt{2}) = 26\sqrt{2}$$



$$\frac{Vx \cdot x \sin A}{r} - \frac{Vx \cdot r \sin A}{r} = 1, Va \Rightarrow$$

$$\frac{V \sin A}{r} (a - r) = 1, Va \Rightarrow V \sin A = \frac{2}{a} \Rightarrow \sin A = \frac{1}{2} \Rightarrow A = 30^\circ$$

$$\tan 30^\circ = \frac{\sqrt{3}}{3}$$

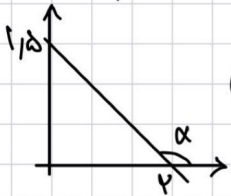
$$\frac{1}{\sqrt{\cos^2 \alpha}} - \tan \alpha = \frac{1 + \sin \alpha}{|\cos \alpha|} \Rightarrow \frac{1}{|\cos \alpha|} - \tan \alpha = \frac{1}{|\cos \alpha|} + \frac{\sin \alpha}{|\cos \alpha|} \Rightarrow \frac{-\sin \alpha}{\cos \alpha} = \frac{\sin \alpha}{|\cos \alpha|} \Rightarrow$$

$$\cos \alpha < 0$$

$$\frac{|\sin \alpha|}{\cos \alpha} = -\frac{1}{\cot \alpha} \Rightarrow \frac{|\sin \alpha|}{\cos \alpha} = -\frac{\sin \alpha}{\cos \alpha} \Rightarrow \sin \alpha < 0$$

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قرار دارد

$$\tan\left(\frac{\pi}{2} - \alpha\right) = \cot \alpha$$



$$(1/a, 0) - (0, 1/b) \Rightarrow m = \frac{1/a - 0}{0 - 1/b} = -\frac{b}{a} = \tan \alpha \Rightarrow \cot \alpha = -\frac{a}{b}$$

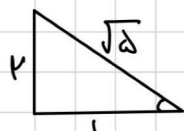
$$\alpha = 120^\circ$$

$$\frac{r \cos\left(\frac{\pi}{2} - \alpha\right) - r \sin(\pi - \alpha)}{\sin(\pi + \alpha) - \cos\left(\frac{\pi}{2} + \alpha\right)} = \frac{-r \sin \alpha - r \sin \alpha}{-\sin \alpha - \sin \alpha} = \frac{-2r \sin \alpha}{-2 \sin \alpha} = \frac{a}{r}$$

$$\cos^2 \alpha + \sin^2 \alpha = 1 \Rightarrow \sin^2 \alpha = 1 - \frac{r^2}{a^2} \Rightarrow \sin \alpha = \pm \frac{\sqrt{a^2 - r^2}}{a} \Rightarrow \tan \alpha = \frac{\sqrt{a^2 - r^2}}{r}$$

$$\frac{\sin\left(\frac{\pi}{2} + \alpha\right) - \sin(\alpha - \pi)}{|\tan^2 \alpha - 1|} = \frac{\cos \alpha - \sin \alpha}{\frac{a}{r} - 1} = \frac{r - \sqrt{a^2 - r^2}}{\frac{a}{r} - 1} = \frac{r - \sqrt{a^2 - r^2}}{\frac{a - r}{r}} = \frac{r(r - \sqrt{a^2 - r^2})}{a - r}$$

$$\sin \alpha = r \cos \alpha \Rightarrow \tan \alpha = r$$

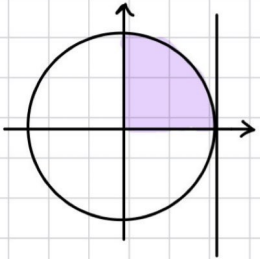


$$\Rightarrow \cos \alpha = \frac{1}{\sqrt{1+r^2}} \Rightarrow \frac{1}{\sqrt{1+r^2}} = \frac{1}{\sqrt{1+1}} = \frac{1}{\sqrt{2}}$$

$$r m n + (m^2 - 1) y = \kappa \stackrel{\div: m^2-1}{\Rightarrow} y = \frac{-r m n}{m^2 - 1} + \frac{\kappa}{m^2 - 1} \quad \tan \varphi_0 = \sqrt{\kappa} \Rightarrow \frac{-r m}{m^2 - 1} = \sqrt{\kappa} \quad -1$$

$$\sqrt{\kappa} m^2 - \sqrt{\kappa} = -r m \Rightarrow \sqrt{\kappa} m^2 + r m - \sqrt{\kappa} = 0 \quad \text{Quadrat, } m^2 + r m - \kappa = 0 \quad a_1 = 1, \quad a_2 = \frac{\kappa}{\sqrt{\kappa}} \Rightarrow$$

$$a_1 - a_2 = \frac{1 - (\frac{\kappa}{\sqrt{\kappa}})}{\sqrt{\kappa}} = \frac{\kappa}{\sqrt{\kappa}}$$



$$-\frac{\pi}{\sqrt{\kappa}} < \alpha < \frac{\pi}{\sqrt{\kappa}} \xrightarrow{x-} -\frac{\pi}{\sqrt{\kappa}} < -\alpha < \frac{\pi}{\sqrt{\kappa}} \xrightarrow{+\frac{\pi}{\sqrt{\kappa}}} 0 < \frac{\pi}{\sqrt{\kappa}} - \alpha < \frac{\pi}{\sqrt{\kappa}} \Rightarrow$$

$$\tan 0 < \tan\left(\frac{\pi}{\sqrt{\kappa}} - \alpha\right) < \frac{\tan \frac{\pi}{\sqrt{\kappa}}}{1} = \frac{1 - m}{r + m} > 0 \Rightarrow \frac{-r}{\sqrt{\kappa}} < \frac{1}{\sqrt{\kappa}} \quad 5$$

$$m \in (-r, 1)$$

$$\underbrace{\tan(\pi_0)}_{-\sqrt{\kappa}} \underbrace{\cos(\pi_0)}_{-\frac{\sqrt{\kappa}}{r}} + \underbrace{\tan(\pi_1)}_{\frac{\tan(\pi_0 + \pi_1)}{-\sqrt{\kappa}}} \underbrace{\sin(\pi_1)}_{\frac{\sin(\pi_0 + \pi_1)}{\frac{\sqrt{\kappa}}{r}}} = \frac{\kappa}{r} - \frac{\kappa}{r} = 0 \quad 5$$