

$y = ax + b \rightarrow k = 1 + b$ و $m = -1 + b$

طول وتر = $\sqrt{(ax)^2 + (ay)^2} \Rightarrow \sqrt{(-1+b)^2 + (k-m)^2}$

مساحت = $(\sqrt{45})^2 = 45$

$\Rightarrow \sqrt{(1+b)^2 + (1+b-1)^2} = \sqrt{4+9} = \sqrt{13} \rightarrow$ مساحت = $(\sqrt{45})^2 = 45$

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$\frac{y}{x} = \tan \theta = \sqrt{3} \Rightarrow \frac{-1+m}{m-1} = \sqrt{3} \Rightarrow \sqrt{3}m^2 - \sqrt{3} + 1m = 0 \rightarrow \Delta = 1 - 4(-3) = 14$

$\rightarrow m = \frac{-1 \pm \sqrt{14}}{2\sqrt{3}}$

مساحت = $\frac{\sqrt{3}}{3} + \sqrt{3} = \frac{\sqrt{3} + 3\sqrt{3}}{3} = \frac{4\sqrt{3}}{3}$

$y = ax + b \rightarrow \begin{cases} 3 = 1a + b \\ 11 = 4a + b \end{cases} \Rightarrow \begin{cases} a = 2, b = -1 \\ a = 2, b = -1 \end{cases} \Rightarrow y = 2x - 1$

طول وتر = $\frac{|9 - 1 + 3|}{\sqrt{5}}$

مساحت = $\frac{1 \cdot 1}{\sqrt{5}} \times \frac{\sqrt{5}}{\sqrt{5}} = \frac{1 \cdot \sqrt{5}}{5} = \frac{\sqrt{5}}{5}$

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ابتدا معادله خط از دو نقطه $\frac{0}{2}$ و $\frac{2}{3}$ را پیدا کنیم:

$$b = -4$$

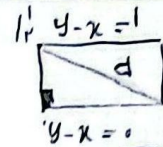
$$0 = -\frac{3}{2}a - 4 \rightarrow \frac{3}{2}a = -4 \rightarrow a = -\frac{8}{3} = -1 \Rightarrow y = -1x - 4$$

حال یک نقطه از این خط را به از راس های مربع را می سازد در مربع هم $x = y$ است:

$$x = -1x - 4 \rightarrow 2x = -4 \rightarrow x = -2 \Rightarrow y = -2$$

پس طول ضلع $\frac{2}{3}$ است پس مساحت: $\frac{1}{2} \times \frac{2}{3} \times \sqrt{2}$

$$\frac{0}{1} \Rightarrow \frac{+a}{1} = \frac{1}{a} \rightarrow a^2 = 1 \rightarrow a = \pm 1 \rightarrow y - x = 1 \text{ و } y - x = 0$$



$$\text{فاصله خط} = \frac{111}{\sqrt{2}} \times \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$10 = \frac{y^2}{4} + \frac{x^2}{4} \rightarrow x^2 = \frac{40 - y^2}{4} \rightarrow x = \frac{\sqrt{40 - y^2}}{2}$$

$$\text{مساحت} = \frac{\sqrt{2}}{2} \times \frac{\sqrt{2}}{2} = \frac{1}{2} = \frac{1}{2}$$



$$\frac{CA}{\sin(45^\circ)} = \frac{1}{\sqrt{2}}$$

$$\text{فاصله} = \frac{1}{\sqrt{2}}$$

$$S_{\text{مربع}} = \frac{27}{10} \times \frac{1}{2} = 1,35$$

$$\Delta \text{ خط } \frac{0}{1} = \frac{b-a}{\frac{1}{2} - (-\frac{1}{2})} = \frac{b-a}{1} = \sqrt{2} \Rightarrow b-a = \sqrt{2}$$

$$\text{طول ضلع} = \sqrt{\left(1 - \frac{1}{2}\right)^2 + \left(\frac{b-a}{2}\right)^2} = \sqrt{\frac{1}{4} + \frac{2}{4}} = \sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{2}$$

$$= \sqrt{\frac{4}{12}} = \frac{2}{\sqrt{3}}$$

$$\text{مساحت} = \text{طول} \times \sqrt{2} = \frac{2}{\sqrt{3}} \times \sqrt{2} = \frac{2\sqrt{2}}{\sqrt{3}} = \frac{2\sqrt{6}}{3}$$

$$\text{مساحت دایره} = \sqrt{4^2 + 3^2} = 5$$

$$\Delta \text{ خط } \frac{0}{1} = \frac{-f}{-3} = \frac{f}{3} \Rightarrow \text{خط } \frac{f}{3} \text{ و } \text{خط } \frac{0}{1} = \frac{3}{4}$$

$$\sqrt{x^2 + y^2} = 5 \Rightarrow x^2 + y^2 = 25$$

میدون نقطه ها است مرکز دایره است پس نام مرکز را پیدا کنیم:

$$\text{خط } y = -\frac{3}{4}x + b \Rightarrow \frac{x}{4} = -\frac{3}{4} \rightarrow x = -3 \rightarrow y = \frac{9}{4} \rightarrow x^2 + y^2 = 25 \rightarrow \frac{9}{16} + \frac{81}{16} = 25 \rightarrow \frac{90}{16} = 25 \rightarrow y = \frac{10}{3}$$

$$= 14 \rightarrow y = \frac{1}{4} \Rightarrow x = \frac{1}{4} \Rightarrow \frac{1}{16} \rightarrow f = -3(-\frac{3}{4}) + b \rightarrow b = \frac{9}{4} \rightarrow y = -\frac{3}{4}x + \frac{9}{4} \rightarrow 4y = -3x + 9 \rightarrow 3x + 4y = 9$$

$$\begin{cases} 3x + 4y = 9 \\ 4y = -3x + 9 \end{cases} \Rightarrow 12y = -9x + 27 \Rightarrow 12y = -9x + 27 \Rightarrow 4y = -3x + 9 \Rightarrow x = 3 \rightarrow y = \frac{3}{4} \rightarrow xy = \frac{9}{4}$$