

$$y = m$$

$$\frac{8}{-1} = -8 \Rightarrow y = -8m - 2$$

$$A \begin{vmatrix} -F \\ 0 \\ 0 \end{vmatrix} \Rightarrow AO = \sqrt{\frac{c}{a} + \frac{c}{a}} = \frac{2\sqrt{2}}{3}$$

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$$y = \frac{1}{a}x + \frac{a-1}{a}d_1$$

$$y = ax + 1 \quad d_1 \parallel d_2 \Rightarrow a = \frac{1}{a} \Rightarrow a = \pm 1$$

$$\frac{1}{\sqrt{2}}$$

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$$a=1 \begin{cases} y-ax=1 \\ ay-x=a-1 \end{cases} \Rightarrow \begin{cases} x-y+1=0 \\ x-y=0 \end{cases} \rightarrow (1,2) \checkmark \Rightarrow a=1$$

$$a=-1 \begin{cases} " \\ " \end{cases} \Rightarrow \begin{cases} x+y-1=0 \\ x+y-2=0 \end{cases}$$

$$\begin{cases} d_1: y=x \\ d_2: y=x+1 \end{cases} \xrightarrow{\text{فاصله}} \frac{1}{\sqrt{2}} \quad S = \frac{1 \times 1}{\sqrt{2} \sqrt{2}} = \frac{1}{2}$$

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فاصله A از خط برابر ارتفاع AH و همچنین یکی از ضلع است

$$\frac{|1(8) - 3(0) - 1|}{\sqrt{10}} = \frac{3\sqrt{10}}{10} = h$$

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$$S = \frac{1}{2}bh \quad \text{بیشترین مساحت} \rightarrow \text{مضلع} \quad BC = h \Rightarrow S = \frac{1}{2} \left(\frac{2\sqrt{10}}{10} \right) \left(\frac{2\sqrt{10}}{10} \right) = \frac{9}{2}$$

$$\frac{b-a}{\frac{1}{4}} = \sqrt{3} \Rightarrow b-a = \frac{\sqrt{3}}{4}$$

$$\text{مساحت} = \sqrt{\left(-\frac{1}{4}\right)^2 + \left(\frac{\sqrt{3}}{4}\right)^2} = \sqrt{\frac{1}{16} + \frac{3}{16}} = \frac{2}{4} = \frac{1}{2} \Rightarrow \text{مساحت}$$

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$$\frac{1}{2} \Rightarrow \frac{\sqrt{2}}{3}$$

$$AO = \sqrt{16+9} = 5$$

$$AO = \frac{4}{3} \rightarrow \text{شیب} = -\frac{3}{4} \quad (-3, -4) \Rightarrow d: 3x+4y+20=0$$

$$d' \rightarrow \text{شیب} = \frac{4}{3} \Rightarrow \frac{4}{3}x - y + k = 0 \quad 4x - 3y + 20 = 0 \quad \text{فاصله از مرکز برابر شعاع دایره}$$

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$$\frac{|4(0) - 3(0) + 20|}{5} = 4 \Rightarrow |20| = 20 \quad k = \pm \frac{20}{3}$$

$$d': 4x - 3y + 20 = 0 \quad d: 4x - 3y - 20 = 0$$

$$\begin{cases} 3x+4y+20=0 \\ 3x-4y+20=0 \end{cases} \Rightarrow \begin{cases} x=-4 \\ y=-1 \end{cases} \quad (-4) \times (-1) = 4$$