

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

$$\overline{AB} = \sqrt{(4+2)^2 + (-1-k)^2} = \sqrt{4^2 + (-1-k)^2} = \sqrt{45}$$

$$(\sqrt{45})' = 45$$

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$$AB \perp BC \quad AB = (2-(-1), 1-2) = (3, -1)$$

$$AD \parallel CD \quad BC = (x-2, y-1)$$

$$CD = (-1-x) - (x), (2)-(y) = (-1-2x, 2-y)$$

$$2(x-2) + (-1)(y-1) = 0$$

$$\begin{cases} AB = 0 \\ BC = \frac{a}{r} \end{cases}$$

$$\frac{f}{-1-2x} = \frac{-2}{2-y}$$

$$x = \frac{f}{2}, y = -1$$

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$$(m^2-1)y + 2mx = 2 \quad y = \frac{-2m}{m^2-1}x + \frac{2}{m^2-1}$$

$$k = -\frac{2m}{m^2-1} = \sqrt{2} \quad \Delta x = \frac{\sqrt{4}}{101}$$

$$\frac{f}{\sqrt{2}} = \frac{f\sqrt{2}}{2}$$

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$$m = \frac{11-2}{2-2} = 2$$

$$BC = y-2 = 2(x-2) \Rightarrow y = 2x-2$$

$$\frac{|2(1)-1-2|}{\sqrt{2^2+(-1)^2}} = \frac{|2-1-2|}{\sqrt{5}} = \frac{1}{\sqrt{5}} = \frac{2\sqrt{5}}{5}$$

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$$AB = y+2x = v$$

$$AC = 2y-2x = 1v$$

$$BC = 2y-vx = -1v$$

$$y = v-2x$$

$$AC \Rightarrow AB \text{ متوازی}$$

$$\begin{cases} 2(v-2x)-2x = 1v \Rightarrow x=1 \\ 2(v-2x)-vx = -1v \Rightarrow x=1 \end{cases} \Rightarrow A \Rightarrow C = \begin{cases} x=1 \\ y=0 \end{cases}$$

$$AC \perp BC \text{ متوازی}$$

$$\frac{|2(1)-2(2)-1v|}{\sqrt{2^2+(-1)^2}} = \frac{2v}{5}$$

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$$m = \frac{-2-0}{0-2} = -1$$

$$\begin{cases} y = -1x-2 \\ y = x \end{cases}$$

$$x = -1x-2 \Rightarrow 2x = -2 \Rightarrow x = -1$$

$$C = (0, -2) \text{ و } (-1, -1)$$

$$d = \frac{2\sqrt{2}}{2}$$

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$$y-x=1 \text{ و } y-ax=1-a \Rightarrow 2-1=1$$

$$1-a=1 \Rightarrow a=1$$

$$\frac{|c-c'|}{\sqrt{a^2+b^2}} = \frac{|1-(0)|}{\sqrt{(1)^2+(-1)^2}} = \frac{1}{\sqrt{2}}$$

$$s^2 + \left(\frac{1}{\sqrt{2}}\right)^2 = 25 \Rightarrow s = \frac{5}{\sqrt{2}}$$

$$A = s \cdot h = \frac{5}{\sqrt{2}} \times \frac{1}{\sqrt{2}} = \frac{5}{2}$$

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$$A \text{ و } B \text{ از } A \text{ و } B$$

$$\Rightarrow \frac{|f-1|}{\sqrt{1^2+(-2)^2}} = \frac{2}{\sqrt{5}}$$

$$s_{max} = \frac{2\sqrt{5}}{5}$$

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$$P(-\frac{1}{2}, 1)$$

$$\frac{b-a}{-\frac{1}{2} + \frac{1}{2}} = \frac{b-a}{\frac{1}{2}} = \sqrt{2} \Rightarrow b-a = \frac{\sqrt{2}}{2}$$

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

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

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$$r = \sqrt{1+1} = \sqrt{2} \Rightarrow x^2 + y^2 = 2$$

$$x+y = -\frac{x}{r}(x+y)$$

$$\text{شیب مماس} = \frac{-f}{-m} = \frac{f}{m}$$

$$\text{شیب عمود} = -\frac{m}{f}$$

$$\frac{f}{m} = \text{شیب عمود} \Rightarrow y = \frac{f}{m}x + \frac{25}{m}$$

$$-vx-1 = \sqrt{2} \quad (-\sqrt{2}, -1) = \text{شیب عمود}$$

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