

$$AB = \frac{\Delta y}{\Delta x} = \frac{m-k}{4} = \frac{1}{4} \rightarrow m-k = 1$$

سوال (۱)

$$AB = \sqrt{\Delta x^2 + \Delta y^2} = \sqrt{4^2 + 1^2} = \sqrt{17}$$

$$x_A + y_C = x_B + y_D$$

سوال (۲)

$$-1 + n = 3 - 1 - n \rightarrow 2n = 3 \rightarrow n = \frac{3}{2}$$

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

$$m = \tan \theta = \frac{1}{\sqrt{3}} \rightarrow m = \frac{1}{\sqrt{3}}$$

$$\frac{1}{m} = \sqrt{3} \rightarrow m = \frac{1}{\sqrt{3}}$$

$$\sqrt{3}m^2 + 4m - \sqrt{3} = 0$$

$$m'^2 + 4m' - 3 = 0$$

$$(m' + 3)(m' - 1) = 0$$

$$m = \frac{1}{\sqrt{3}} \rightarrow m' = 1$$

$$m_{BC} = \frac{\Delta y}{\Delta x} = \frac{11-3}{4-2} = 4$$

$$AH = \frac{|9 - 2 + 3|}{\sqrt{50}} = \frac{10}{\sqrt{50}} = \frac{2\sqrt{5}}{5}$$

$$y = 2x - 3$$

$$AH = \frac{|ax + by + c|}{\sqrt{a^2 + b^2}}$$

$$\begin{cases} y + 2x = 7 \\ 3y - 7x = 19 \end{cases} \Rightarrow \begin{cases} -2y - 4x = -14 \\ 3y - 7x = 19 \end{cases} \Rightarrow \begin{cases} -11x = -27 \\ x = \frac{27}{11} \end{cases}$$

سوال (۳)

$$BH = \frac{|a + b + c|}{\sqrt{a^2 + b^2}} = \frac{|1 - 9 - 14|}{\sqrt{1 + 1}} = \frac{22}{\sqrt{2}}$$

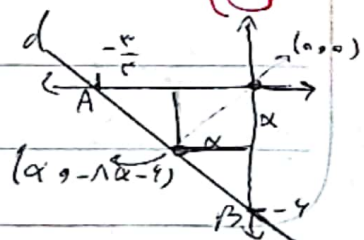
$$m = \frac{0+4}{-1-1} = -2 \rightarrow y = -2x + 4$$

سوال (۴)

$$-11x - 9 \rightarrow x = -11x - 9$$

$$9x = 4 \rightarrow x = \frac{4}{9}$$

$$= \sqrt{\Delta x^2 + \Delta y^2} = \sqrt{\left(\frac{4}{9}\right)^2 + \left(\frac{4}{9}\right)^2} = \frac{4\sqrt{2}}{9}$$



$$m \Rightarrow \frac{1}{a} z \frac{a}{1} \rightarrow a^2 z \rightarrow a z + 1$$

(5)

$$a z \rightarrow y z + 1, y z \rightarrow n \xrightarrow{\text{نقطه (1,2) یا (2,1) منبسط}} \sqrt{2} z + 1 \rightarrow a z$$

$$a z \rightarrow y z + 1, y z \rightarrow n + 1 \xrightarrow{(1,2)} \sqrt{2} z - 1 + 1 \rightarrow \sqrt{2} z - 1 + 1 \rightarrow \sqrt{2} z$$

$$\frac{|c-c'|}{\sqrt{a^2+b^2}} = \frac{|-1+1|}{\sqrt{2}} = \frac{\sqrt{2}}{2} \quad \text{ضلع } z = \sqrt{\frac{49}{2}} = \frac{7}{\sqrt{2}}$$

$$\sqrt{2} z \text{ طول } r + \text{عرض } r \rightarrow 2 \cdot \left(\frac{\sqrt{2}}{2}\right)^2 = \frac{49}{2} \quad \text{س } z = \frac{7}{\sqrt{2}} \times \frac{\sqrt{2}}{2} = \frac{7}{2}$$

$$g = \frac{1}{3}x - \frac{1}{3} \quad m_{AC} = -3 \Rightarrow y = -3(n-4) \Rightarrow y = -3n + 12$$

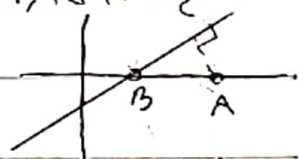
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$$-3n + 12 = \frac{1}{3}n - \frac{1}{3} \Rightarrow \frac{10}{3}n = \frac{35}{3} \Rightarrow n = 3.5 \quad y = 0.9$$

نقطه بر خط را بیابیم
نقطه $(\frac{1}{3}, \frac{4}{3})$ در منصف است پس B باید به سمت C باشد (سریعاً) B است $n = 3.5$ می آید A را

$$AC = \sqrt{(1-3)^2 + (0-4)^2} = \sqrt{20} = 2\sqrt{5} \quad BC = \sqrt{(2-1)^2 + (0-4)^2} = \sqrt{17}$$

$$S = \frac{AB \times BC}{2} = \frac{2\sqrt{5} \times \sqrt{17}}{2} = \sqrt{85}$$



$$m_{AB} = \frac{a-b}{-\frac{1}{3} + \frac{1}{3}} = \sqrt{17} \rightarrow a-b = \frac{\sqrt{17}}{2} \quad AB = \sqrt{0n^2 + 0y^2} = \sqrt{\frac{1}{4} + \frac{4}{4}} = \frac{5}{2}$$

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$$S = \left(\frac{5}{2}\right)^2 = \frac{25}{4} \quad S = \left(\frac{\text{طول}}{2}\right)^2 \rightarrow \frac{25}{4} = \frac{D^2}{4} \rightarrow D^2 = 25 \rightarrow D = 5 \quad \text{طول می تواند منفی باشد}$$

$$m = \frac{dy}{dx} = \frac{0+2}{0+2} = \frac{2}{2} \quad m_{AM} = -1 \rightarrow m = -\frac{2}{2} \rightarrow m = -1 \quad \text{سوال 1}$$

$$C \text{ باشد: } y+2 = -\frac{2}{2}(n+2) \rightarrow y = -n-2$$

$$(-\frac{2}{2}y)^2 + y^2 = 20 \rightarrow y^2 = 4 \quad y = 2, n = -2 \quad y = -2, n = 2$$

$$y = -2 \Rightarrow y = \frac{2}{2}(n+2) \rightarrow y = n+2$$

$$-\frac{2}{2}n + 2 = \frac{2}{2}n + 2 \rightarrow n = 0$$

$$\frac{20}{12}n = \frac{170}{12} \rightarrow n = 17 \quad y = -1$$

$$ny \rightarrow (-1)(-1) = 1$$

$$(-4)^2 + (-4)^2 = 32 \quad r = 0$$