

$$mn + h \sim m = \frac{m-k}{k-(-2)} = \frac{-1}{2} \sim m - k = -3$$

$$\text{فاصله نقطه } A \text{ و } B: \sqrt{\Delta x^2 + \Delta y^2} = \sqrt{(-1-(-2))^2 + (m-k)^2} = \sqrt{1^2 + (-3)^2} = \sqrt{10} = \sqrt{5} \times 2$$

$$AB = CD \sim \sqrt{5} \times 2 \sim \sqrt{5} \times 2 = \boxed{4\sqrt{5}} \checkmark$$

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$$AB = CD \quad A \sim B \sim \sqrt{(-1)^2 + (-1)^2} = \sqrt{2} \times 2 = \boxed{2\sqrt{2}} \checkmark$$

$$AD = BC = \sqrt{\frac{1}{2}^2 + 2^2} = \sqrt{\frac{1}{4} + 4} = \sqrt{\frac{17}{4}} = \frac{\sqrt{17}}{2} \checkmark$$

$$C \sim D \sim \sqrt{(m-(-1-n))^2 + (y-(y+2))^2} = \sqrt{(2m+1)^2 + (-2)^2} = \sqrt{4m^2 + 4m + 5}$$

$$AB = CD \rightarrow \sqrt{4m^2 + 4m + 5} = 2\sqrt{2} \rightarrow 4m^2 + 4m + 5 = 8 \rightarrow 4m^2 + 4m - 3 = 0$$

$$(2m+3)(m-1) = 0 \rightarrow m = -\frac{3}{2} \text{ یا } m = 1$$

$$\text{محیط مستطیل } 10 \checkmark$$

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$$m = \tan \alpha$$

$$\tan 45^\circ = \sqrt{3}$$

$$\frac{2m}{m^2-1} = \sqrt{3} \rightarrow \sqrt{3}m^2 - \sqrt{3} + 2m = 0$$

$$m^2 + 2m - 3 = 0 \rightarrow (m+3)(m-1) = 0 \rightarrow m = -3 \text{ یا } m = 1$$

$$\frac{1}{\sqrt{3}} - \left(\frac{-3}{\sqrt{3}} \right) = \boxed{\frac{4}{\sqrt{3}}} \checkmark$$

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$$m = \frac{11-3}{1-3} = 2 \rightarrow \frac{1}{2} \text{ AH}$$

$$BC \sim y = 2m + h \rightarrow h = -3 \sim 2m - 3$$

$$AH \sim y = -\frac{1}{2}x + h \rightarrow h = \frac{19}{2} \sim -\frac{1}{2}x + \frac{19}{2}$$

$$4m - 3 = -\frac{1}{2}x + \frac{19}{2} \rightarrow x = 10 \rightarrow y = 17$$

$$AH \sim \sqrt{(4-1)^2 + (17-9)^2} = \sqrt{9 + 64} = \boxed{5\sqrt{5}} \checkmark$$

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$$A \Rightarrow \frac{3m+14}{2} = 1-2m \rightarrow m = 1 \rightarrow y = 4$$

$$C \Rightarrow \frac{3m+19}{2} = \frac{3m+14}{2} \rightarrow m = 1 \rightarrow y = 1$$

$$B \Rightarrow 1-2m = \frac{3m-19}{2} \rightarrow m = 3 \rightarrow y = 1$$

$$BC \sim \frac{3}{2}m + h \rightarrow h = \frac{14}{2} = 7$$

$$BH \sim \left| \frac{3-9-14}{\sqrt{5}} \right| = \left| \frac{-11}{\sqrt{5}} \right| = \boxed{\frac{11}{\sqrt{5}}} \checkmark$$

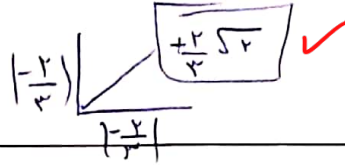
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$$y = mx + h \quad m > \dots$$

$$m = \frac{-4}{\frac{2}{3}} = -6 \quad y = -6x - 4$$

$$نصف اول \quad x = -6m - 4$$

$$x = \frac{-2}{3}$$



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$$\frac{1}{a} = a \quad a = \pm 1$$

$$y = x \quad y = -x + 2 \quad \text{تقاطع}$$

$$y = x + 1 \quad y = -x + 1 \quad \text{تقاطع}$$

$$a = 1 \quad a = -1$$

$$\frac{\sqrt{2}}{2} \times \frac{1}{\sqrt{2}} = \frac{1}{2} \quad \checkmark$$

$$\frac{|1 - 0 + 1|}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$\sqrt{\left(\frac{\sqrt{2}}{2}\right)^2 + m^2} = a$$

$$x = \frac{69}{2}$$

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

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$$\frac{|am + by + c|}{\sqrt{a^2 + b^2}} \quad \frac{|6 - 0 - 1|}{\sqrt{10}} = \frac{5}{\sqrt{10}} \quad \checkmark$$

$$a = \frac{14 - 9}{10}$$

$$a = \frac{\sqrt{101}}{10}$$

$$x - 3y = 1$$

$$y = -\frac{1}{3}x + \frac{1}{3}$$

$$x = \frac{36}{10}$$

$$y = \frac{9}{10}$$

$$\frac{\text{مساحة المثلث}}{2} =$$

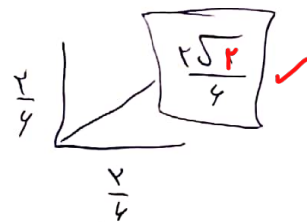
$$\frac{\sqrt{\frac{101}{10}} \times \frac{3\sqrt{10}}{10}}{2} = \frac{3\sqrt{101}}{20}$$

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$$m = \frac{b-a}{-\frac{1}{4} + \frac{1}{4}} = \sqrt{2} \quad b-a = \frac{\sqrt{2}}{4} \quad \checkmark$$

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

$$\frac{1}{44} + \frac{2}{44} = \frac{3}{44}$$



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$$\text{مع } m = \frac{-5}{-3} = \frac{5}{3} \quad \text{نصف اول} \rightarrow -\frac{5}{3}x + h \rightarrow y = -\frac{5}{3}x + h$$

$$-5 = -\frac{5}{3}(-3) + h \quad \left. \begin{array}{l} h = \frac{-10}{3} \\ -\frac{5}{3}x - \frac{10}{3} \end{array} \right\}$$

$$y = \frac{5}{3}x - \frac{10}{3}$$

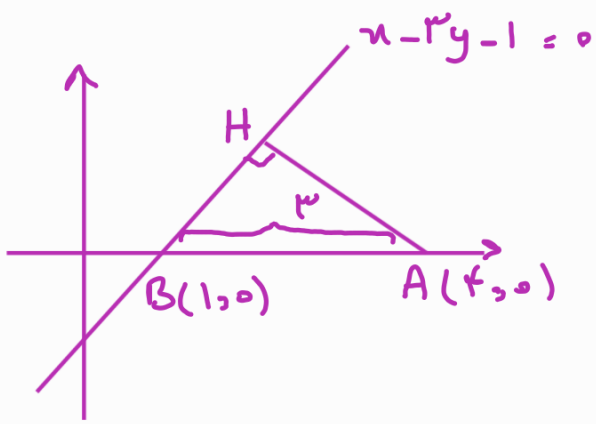
$$y = -\frac{5}{3}x - \frac{10}{3}$$

$$\left. \begin{array}{l} x = -2 \\ y = -1 \end{array} \right\} \quad \checkmark$$

$$xy = -2 \times -1 = 2 \quad \checkmark$$

$$\frac{h}{\sqrt{1+14}} = a \rightarrow h = \frac{10}{3}$$

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$$|AH| = \frac{|4 - 0 - 1|}{\sqrt{1+1}} = \frac{r}{\sqrt{2}}$$

$$\frac{9}{10} (\cancel{AH})^2 + (BH)^2 = (\cancel{AB})^2 \rightarrow BH = \frac{9}{\sqrt{10}}$$

$$S_{\Delta} = \frac{9}{\sqrt{10}} \times \frac{r}{\sqrt{10}} \times \frac{1}{r} = \frac{rV}{r_0} = 1,35$$