

$$m = -\frac{1}{r} = \frac{m-k}{\epsilon+r} = \frac{m-k}{r} \rightarrow m-k = -r$$

$$AB = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} \Rightarrow \sqrt{(\frac{r}{r})^2 + (\frac{m-k}{-r})^2} = \sqrt{r^2 + 9} = \sqrt{10} \rightarrow \text{المسافة}$$

$$S = \sqrt{10} \times \sqrt{10} = 10$$

$$x_A + x_C = x_B + x_D \rightarrow -1 + x = 3 = 1 + x \rightarrow 2x = 3 \rightarrow x = \frac{3}{2} \rightarrow C(\frac{3}{2}, 9), D(-\frac{3}{2}, 9+r)$$

$$CD = \sqrt{(\frac{3}{2} + \frac{3}{2})^2 + (9 - 9 - r)^2} = \sqrt{\epsilon^2 + (-r)^2} = \sqrt{10} = 10$$

$$AC = \sqrt{(\frac{3}{2})^2 + (9 - \epsilon)^2} = BD = \sqrt{(-\frac{11}{2})^2 + (9+r)^2} \rightarrow \frac{r^2}{\epsilon} + (9 - \epsilon)^2 = \frac{121}{\epsilon} + (9+r)^2 \rightarrow y = -1$$

$$\rightarrow AC = \frac{17\sqrt{5}}{\epsilon} \rightarrow \frac{1}{\epsilon} \cdot r(\frac{1}{\epsilon} + \frac{170}{\epsilon}) = 17\sqrt{5}$$

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

$$\Delta: \epsilon + 17 = 14 \rightarrow \frac{-r \pm \sqrt{14}}{2\sqrt{3}} \begin{cases} \frac{1}{\sqrt{3}} \\ -\frac{r}{\sqrt{3}} \end{cases} \text{المسافة: } \frac{1}{\sqrt{3}} - (-\frac{r}{\sqrt{3}}) = \frac{\epsilon}{\sqrt{3}} = \frac{\epsilon\sqrt{3}}{3}$$

$$BC: m = \frac{11-r}{v-r} = \frac{1}{\epsilon} = r \rightarrow y = 3 = 2(x-3) \rightarrow y - 2x + 3 = 0$$

$$AH: \frac{|-2+9+3|}{\sqrt{1+\epsilon}} = \frac{10}{\sqrt{10}} = r\sqrt{10}$$

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

$$BC: y = \frac{v-19}{r} \Rightarrow -2x + v = \frac{v-19}{r} \rightarrow -\epsilon x + 1\epsilon = v-19 \rightarrow 11x = 33 \rightarrow x = 3, y = 1 \Rightarrow B(3, 1)$$

$$d = \frac{|-9+1-10|}{\sqrt{19+9}} = \frac{20}{\Delta} \rightarrow BH \text{ ج}$$

$$A(-\frac{3}{4}, 0) \quad B(0, -4) \rightarrow m = \frac{4}{-\frac{3}{4}} = -\frac{16}{3} \rightarrow y+4 = -\frac{16}{3}x \rightarrow y = -\frac{16}{3}x - 4 \rightarrow m = y$$

$$\rightarrow -\frac{16}{3}x - 4 = x \rightarrow 9x = -4 \rightarrow x = -\frac{4}{9}$$

اینجا افق را به دست آوردیم

$$\text{فاصله: } \sqrt{\left(-\frac{4}{9}\right)^2 + \left(-\frac{4}{3}\right)^2} = \frac{4\sqrt{2}}{3}$$

$$m \rightarrow a = \frac{1}{a} \rightarrow a^2 = 1 \rightarrow a = 1, a = -1$$

$$a = 1 \rightarrow y - x = 0, y - x = 1 \rightarrow \text{نقطه } (1, 2) \text{ و } (0, 1) \text{ را به دست آوردیم}$$

$$a = -1 \rightarrow -y - x = 0, y + x = 1 \rightarrow \text{نقطه } (1, 2) \text{ و } (0, -1) \text{ را به دست آوردیم} \rightarrow a = 1$$

$$\text{فاصله: } \frac{|0+1|}{\sqrt{1+1}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2} \rightarrow \sqrt{\left(\frac{\sqrt{2}}{2}\right)^2 + (n)^2} = 2 \rightarrow \frac{1}{2} + n^2 = 4 \rightarrow n^2 = \frac{7}{2} \rightarrow n = \frac{\sqrt{14}}{2}$$

$$\Rightarrow n = \frac{\sqrt{14}}{2} = \frac{\sqrt{2} \times \sqrt{7}}{2} \rightarrow \text{فاصله: } S = \frac{\sqrt{2}}{2} \times \frac{\sqrt{7}}{2} = \frac{14}{4} = \frac{7}{2}$$

$$d: \frac{|1+0-1|}{\sqrt{1+9}} = \frac{0}{\sqrt{10}} = 0$$

$$\Rightarrow S = \frac{1}{2} \times \frac{\sqrt{10}}{1} \times \frac{\sqrt{10}}{1} = \frac{10}{2} = 5$$

$$\text{فاصله: } \frac{3}{\sqrt{10}} = \frac{3\sqrt{10}}{10}$$

$$m = \sqrt{2} = \frac{a-b}{-\frac{1}{2} + \frac{1}{2}} \rightarrow a-b = -\frac{\sqrt{2}}{2} \quad d: \sqrt{\left(-\frac{1}{2}\right)^2 + \left(\frac{\sqrt{2}}{2}\right)^2} = \sqrt{\frac{1}{4} + \frac{2}{4}} = \sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{2} \rightarrow \text{فاصله: } \frac{1}{\sqrt{3}}$$

$$\text{فاصله: } \sqrt{\left(\frac{1}{2}\right)^2 + \left(\frac{1}{2}\right)^2} = \frac{\sqrt{2}}{2}$$

$$r: \sqrt{9+16} = \sqrt{25} = 5 \quad m_1 = -\frac{3}{4} \quad L: x = y + 5 = \frac{3}{4}(x+3) \rightarrow 4y = -3x - 15$$



$$L: x = y + 5 \rightarrow \sqrt{x'^2 + y'^2} = 5 \rightarrow x'^2 + y'^2 = 25 \rightarrow \frac{16}{9}y' + y' = 25$$

$$\frac{25}{9}y' = 25 \rightarrow y' = 3, x' = -4$$

$$L: x = y + 5 = \frac{3}{4}(x+3) \rightarrow 4y = 3x + 15$$

$$\frac{-3m - 15}{4} = \frac{3m + 15}{4} \rightarrow 9m - 15 = 3m + 15 \rightarrow 6m = 30 \rightarrow m = 5 \rightarrow y = -1 \rightarrow \begin{vmatrix} 1 & 5 \\ -1 & -5 \end{vmatrix} = -10$$

s.a.m

$$\Rightarrow xy = (-1)(-5) = 5$$