

$$\frac{m-K}{K-(-1)} = -\frac{1}{p} \Rightarrow m-K = -1$$

$$B(1, m) \text{ و } A(-1, K) \quad -1$$

$$AB = \sqrt{(K-(-1))^2 + (m-K)^2} = \sqrt{K^2 + 1} = \sqrt{45} = 3\sqrt{5} \quad S = \sqrt{45} \times \sqrt{45} = 45$$

$$O(-1, -1), C(1, 1), B(1, 1), A(-1, 1) \quad -2$$

$$m_{CD} = \frac{1-1}{1-(-1)} = -\frac{1}{2} \Rightarrow -1 + 1x = -1 \Rightarrow 1x = 0 \Rightarrow x = 0 \quad m = -\frac{1}{2} \quad CD \parallel AB$$

$$m_{BC} = \frac{1-1}{1-1} = \frac{0}{0} \Rightarrow 1x - 1 = 1 - 1y \Rightarrow 1x - 1 = 0 \Rightarrow 1x = 1 \Rightarrow x = 1 \Rightarrow y = 1 \Rightarrow x = 1, y = 1$$

$$\Rightarrow C(\frac{1}{2}, -1) \text{ و } O(-\frac{1}{2}, 1) \quad AB = \sqrt{9 + 16} = 5$$

$$BC = \sqrt{K^2 + \frac{9}{K^2}} = \sqrt{\frac{K^4 + 9}{K^2}} = \frac{\sqrt{K^4 + 9}}{K} \quad S = 2(\frac{5}{2} + 5) = 15$$

$$\tan \theta = \frac{-1m}{m^2 - 1} = -\frac{1}{m} \Rightarrow -\frac{1}{m} = \frac{1}{m} \Rightarrow m^2 = -1 \Rightarrow m = \pm i$$

$$\Delta = K^2 + 16 = 17 \quad m = \frac{-1 \pm \sqrt{17}}{2}$$

$$m_1 - m_2 = \frac{1}{\sqrt{17}} - \frac{-1}{\sqrt{17}} = \frac{2}{\sqrt{17}}$$

$$m_{BC} = \frac{1}{K} = 1 \quad m_{AH} = -\frac{1}{K} \quad AH = \sqrt{K^2 + 16} = \sqrt{20} \quad -3$$

$$y - 1 = 1(x - 1) \quad y - 1 = -\frac{1}{K}(x - 1)$$

$$y = x - 1 \quad y = -\frac{1}{K}x + \frac{1}{K} \Rightarrow x - 1 = -\frac{1}{K}x + \frac{1}{K} \Rightarrow x - \frac{1}{K}x = 1 - \frac{1}{K} \Rightarrow x(\frac{K-1}{K}) = \frac{K-1}{K} \Rightarrow x = 1 \Rightarrow y = 0$$

$$x - 1 = -\frac{1}{K}x + \frac{1}{K} \Rightarrow x - \frac{1}{K}x = 1 - \frac{1}{K} \Rightarrow x(\frac{K-1}{K}) = \frac{K-1}{K} \Rightarrow x = 1 \Rightarrow y = 0 \quad H(1, 0)$$

$$\begin{cases} y + 1x = 1 \\ x - y = 1 \end{cases} \Rightarrow \begin{cases} -x - y = -1 \\ x - y = 1 \end{cases} \Rightarrow \begin{cases} -2y = 0 \\ x - y = 1 \end{cases} \Rightarrow \begin{cases} y = 0 \\ x = 1 \end{cases} \quad A(1, 0)$$

$$m_{AC} = \frac{1}{K} \quad m_{BH} = -\frac{1}{K} \quad -4$$

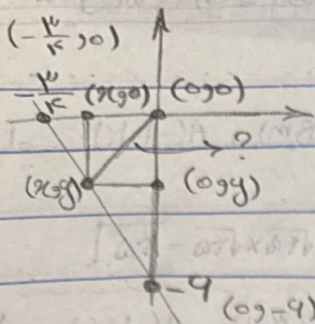
$$\begin{cases} y - 0 = \frac{1}{K}(x - 1) \\ y - 1 = -\frac{1}{K}(x - 1) \end{cases} \Rightarrow \begin{cases} y = \frac{1}{K}x - \frac{1}{K} \\ y = -\frac{1}{K}x + \frac{1}{K} \end{cases}$$

$$\begin{cases} y + 1x = 1 \\ x - y = 1 \end{cases} \Rightarrow \begin{cases} -x - y = -1 \\ x - y = 1 \end{cases} \Rightarrow \begin{cases} -2y = 0 \\ x - y = 1 \end{cases} \Rightarrow \begin{cases} y = 0 \\ x = 1 \end{cases} \quad B(1, 0)$$

$$\frac{-1x + 0}{K} = \frac{1x + 1}{K} \Rightarrow -x = x + 1 \Rightarrow -2x = 1 \Rightarrow x = -\frac{1}{2} \Rightarrow y = \frac{3}{2}$$

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

$$BH = \sqrt{(1 - (-\frac{1}{2}))^2 + (0 - \frac{3}{2})^2} = \sqrt{(\frac{3}{2})^2 + (\frac{3}{2})^2} = \sqrt{\frac{9}{2}} = \frac{3}{\sqrt{2}}$$



$$x = y \text{ (مستقيم)} \Rightarrow x = y$$

$$\Rightarrow x = y = -z$$

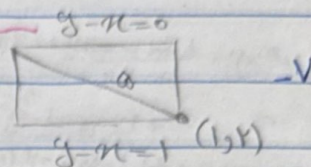
$$m = \frac{-9 - 0}{0 - (-\frac{10}{9})} = -1 \quad y + 9 = -1(x - 0) \Rightarrow y = -x - 9$$

$$\Rightarrow -z = +1 \Rightarrow z = -1 \Rightarrow z = \frac{1}{9} \Rightarrow x = y = -\frac{1}{9}$$

$$d = \sqrt{\frac{1}{9} + \frac{1}{9}} = \frac{\sqrt{2}}{9} = \frac{1}{9} \sqrt{2}$$

$$m = a = \frac{1}{a} \Rightarrow a = \pm 1 \Rightarrow y - x = 1 \Rightarrow (1, 2)$$

$$y - x = 0$$



$$d = \frac{|y - x|}{\sqrt{2}} = \frac{|2 - 1|}{\sqrt{2}} = \frac{1}{\sqrt{2}}$$

$$\omega = \left(\frac{1}{\sqrt{2}}\right)^2 + x^2 \Rightarrow x^2 = \omega - \frac{1}{2} = \frac{9}{2} \Rightarrow x = \frac{3}{\sqrt{2}}$$

$$S = \frac{1}{\sqrt{2}} \times \frac{3}{\sqrt{2}} = \frac{3}{2}$$

$$d = \frac{|1 + 0 - 1|}{\sqrt{1 + 9}} = \frac{0}{\sqrt{10}} = 0 \Rightarrow \text{المسافة} = \frac{3}{\sqrt{10}}$$

$$\Rightarrow S = \frac{1}{2} d^2 = \frac{1}{2} \times \frac{9}{10} = \frac{9}{20}$$

$$\frac{\Delta y}{\Delta x} = \frac{a - b}{-\frac{1}{9} - (-\frac{1}{9})} = \sqrt{3} \Rightarrow a - b = \frac{\sqrt{3}}{9}$$

$$AB = \sqrt{(a - b)^2 + \left(\frac{1}{9}\right)^2} = \sqrt{\frac{3}{81} + \frac{1}{81}} = \frac{2}{9}$$

$$m_{AO} = \frac{1}{9} \Rightarrow m_L = -\frac{9}{1} = -9 \Rightarrow y + 9 = -9(x + 3) \Rightarrow y = -9x - 27$$

$$m_L = -\frac{9}{1} \Rightarrow y = -9x + b \Rightarrow |y - \frac{1}{9}x - b| = \omega \Rightarrow |y - \frac{1}{9}x - b| = \frac{\sqrt{2}}{9}$$

$$m_{BO} = -\frac{9}{1} \Rightarrow (-9 + 9) \Rightarrow |b| = \frac{\sqrt{2}}{9} \Rightarrow b = \pm \frac{\sqrt{2}}{9}$$

$$y = -\frac{1}{9}x - \frac{\sqrt{2}}{9} \Rightarrow x = -9y - \sqrt{2}$$

$$y = \frac{1}{9}x + \frac{\sqrt{2}}{9} \Rightarrow x = 9y + \sqrt{2}$$

$$\begin{cases} y + \frac{1}{9}x = -\frac{\sqrt{2}}{9} \\ -y + \frac{1}{9}x = -\frac{\sqrt{2}}{9} \end{cases} \Rightarrow \frac{1}{9}x + \frac{1}{9}x = -\frac{\sqrt{2}}{9} - \frac{\sqrt{2}}{9} \Rightarrow \frac{2}{9}x = -\frac{2\sqrt{2}}{9} \Rightarrow x = -\sqrt{2} \Rightarrow y = -1$$