

$$m_{AB}: \frac{K-m}{-2-4}, -\frac{1}{2} \rightarrow \boxed{K-m-3}$$

$$\overline{AB}: \sqrt{(4-2)^2 + (m-K)^2}, \sqrt{36+9}, \sqrt{45} \rightarrow \text{فلج برع} \rightarrow \sqrt{45}, 45, \text{متبع} \checkmark$$

$$\tan 60^\circ, \sqrt{3} \rightarrow y, -\frac{2m}{m^2+1}x+3 \rightarrow -\frac{2m}{m^2+1}, \sqrt{3}$$

$$\sqrt{3}m^2 - \sqrt{3} - 2m \rightarrow \sqrt{3}m^2 + 2m - \sqrt{3} \rightarrow \Delta, 16 \rightarrow \frac{-2 \pm 4}{2\sqrt{3}} \rightarrow \frac{\sqrt{3}}{3}, -\sqrt{3} \rightarrow \left| \frac{\sqrt{3}}{3} + \sqrt{3} \right|, \boxed{\frac{4\sqrt{3}}{3}} \checkmark$$

$$\overline{AB}: \sqrt{4^2 + 3^2}, (5) \rightarrow m_{AB}: \frac{4-1}{-1-3}, -\frac{3}{4} = m_{CD}: \frac{y-y-3}{2x+1}$$

$$\rightarrow x, 1/5 \rightarrow m_{CB}: \frac{4}{3}, \frac{1-2}{3-1/5} \rightarrow y, -1$$

$$\overline{CB}: \sqrt{(1/5)^2 + 2^2}, 2/5 \rightarrow 10+5, 15 \checkmark$$

$$m_{CB} = \frac{3-11}{3-7}, 2 \rightarrow y, 2x-3 \rightarrow \overline{AH}: BC: A$$

$$\overline{AH}: \boxed{2\sqrt{5}} \checkmark, \frac{|9-2+3|}{\sqrt{1+4}}$$

$$\overline{BC}: y, 3/5x - 9/5, \overline{AB}: y, -2x+7$$

$$3/5x - 9/5 = -2x+7 \rightarrow x=3, y, 1 \rightarrow B(3,1)$$

$$\overline{BH}: \frac{|4-9-17|}{\sqrt{16+9}}, \boxed{4/4} \checkmark$$

$$\Rightarrow \text{معادله خط} \quad A(-\frac{3}{4}, 0) / B(0, -6) \rightarrow m_{AB} = \frac{-6-0}{0+\frac{3}{4}} = -8$$

$$y = -8x - 6 \quad \text{معادله خط}$$

$$-8x - 6 = x \rightarrow x = -\frac{2}{3} \quad y = -\frac{2}{3}$$

$$D(-\frac{2}{3}, -\frac{2}{3}) \rightarrow \overline{OD} = \sqrt{(\frac{2}{3})^2 + (\frac{2}{3})^2} = \frac{2\sqrt{2}}{3}$$

$$y = ax + 1 / y = \frac{y}{a} + 1 - \frac{1}{a} \quad \text{مقایسه} \quad a = \frac{1}{a} \rightarrow a = 1, -1$$

اگر $a = 1$ باشد معادله خط $y = x + 1$ و اگر $a = -1$ باشد معادله خط $y = -x + 1$

عرض $\frac{1}{\sqrt{2}}$ فاصله $y = x + 1$ و $y = -x + 1$ در $x = 0$ و $y = 1$

$$\text{مساحت} \quad 25 - \frac{1}{2} \cdot \frac{49}{2} = \frac{7}{\sqrt{2}} \quad \boxed{\frac{7}{2} = 3.5}$$

مساحت $9 - 3y = 1 \rightarrow y = 1$ و $y = 1$ در $x = 1$

وتر: $4-1=3$ و وتر دیگر: $\frac{3\sqrt{10}}{10}$

نسبت $\frac{3}{10}$ و $\frac{3\sqrt{10}}{10}$ و $\frac{14-1}{\sqrt{10}}$ و $\frac{3}{\sqrt{10}}$

$$\text{نسبت} \quad \frac{9}{10} \cdot \frac{3}{\sqrt{10}} = \frac{27}{10\sqrt{10}} = \frac{1}{35}$$

$$\text{نسبت} \quad \frac{a-b}{-\frac{1}{2} + \frac{1}{3}} \sqrt{3} = a-b = \frac{\sqrt{3}}{6}$$

$$\sqrt{(\frac{1}{3} + \frac{1}{2})^2 + (b-a)^2} = \sqrt{\frac{1}{36} + \frac{3}{36}} = \frac{2}{6} = \frac{1}{3}$$

مساحت مربع $\rightarrow \frac{\sqrt{2}}{3}$

$$\sqrt{9+16} = 5 \quad \text{مساحت} \quad y = \frac{4}{3}x \quad \text{نسبت} \quad \frac{y}{x} = \frac{4}{3}$$

$$y + 4 = -\frac{3}{4}(x + 3) \rightarrow 3x + 4y = 25 \quad (-4, 3)$$

$$y = 3, \frac{4}{3}(x+4) = 4x - 3y = 25 \rightarrow x = 7, y = 1$$