

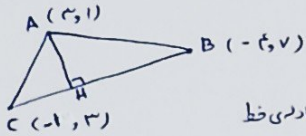
$$A(2, -6), B(7, 1) \Rightarrow m \leq \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - (-6)}{7 - 2} = \frac{7}{5} \leq -v \xrightarrow{\text{نقطه در}} m' \leq \frac{1}{v}$$

(۱)

$$A \xrightarrow{C} B \Rightarrow C\left(\frac{4+7}{2}, \frac{-6+1}{2}\right) \Rightarrow C(5.5, -2.5)$$

حقیقا نقطه وسط پاره خط

$$\frac{1}{v}x + b \leq y \Rightarrow \frac{1}{v}x + \frac{c}{v} \leq y \Rightarrow \frac{1}{v}x + b \leq 1 \Rightarrow b \leq \frac{c}{v} \Rightarrow \frac{1}{v}x + \frac{c}{v} \leq y$$



$$BC - AH = 0 - 2 = -2$$

$$BC \Rightarrow m \leq \frac{y_2 - y_1}{x_2 - x_1} = \frac{7 - 1}{-2 - (-1)} = \frac{6}{-1} = -6 \Rightarrow \frac{c}{v}x + b = y \Rightarrow \frac{c}{v}(-1) + b = 7 \Rightarrow b = \frac{c}{v} + 7$$

$$BC \leq \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = \sqrt{(-1 - (-2))^2 + (7 - 1)^2} = \sqrt{1 + 36} = \sqrt{37}$$

$$AH \leq \frac{|ax + by - c|}{\sqrt{a^2 + b^2}} \Rightarrow AH \leq \frac{|\frac{1}{v}x + \frac{c}{v} - 1|}{\sqrt{\frac{1}{v^2} + \frac{c^2}{v^2}}} = \frac{\frac{1}{v}}{\frac{\sqrt{1 + c^2}}{v}} = \frac{1}{\sqrt{1 + c^2}}$$

$$\begin{cases} 4y - ax = 2 \\ 2y - x = v \end{cases} \Rightarrow \begin{cases} 4y - ax = 2 \\ 2y - x = v \end{cases} \Rightarrow \begin{cases} 4y - ax = 2 \\ 2y - x = v \end{cases} \Rightarrow \begin{cases} 4y - ax = 2 \\ 2y - x = v \end{cases}$$

$$4y = ax + 2 \Rightarrow \frac{4}{a}y = x + \frac{2}{a} \Rightarrow \frac{4}{a}y = x + \frac{2}{a} \Rightarrow \frac{4}{a}y = x + \frac{2}{a}$$

$$S = \pi r^2 = \left(\frac{v}{\sqrt{1 + c^2}}\right)^2 \pi = \frac{v^2}{1 + c^2} \pi = \frac{a}{a} \pi$$

$$AB \Rightarrow m \leq \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - (-6)}{7 - 2} = \frac{7}{5} \leq -1 \Rightarrow m(x + b) = y \Rightarrow -1(x) + b = 1 \Rightarrow b = 2 \Rightarrow y \leq -x + 2$$

$$CH \Rightarrow m \cdot m' = -1 \Rightarrow m' \leq -1 \Rightarrow \frac{1}{m}x + b = y \Rightarrow -1 + b = -2 \Rightarrow b = -1 \Rightarrow y \leq x - 2$$

$$M\left(\frac{4+7}{2}, \frac{-6+1}{2}\right) = M(5.5, -2.5) \Rightarrow \frac{1}{v}x + \frac{c}{v} = y \Rightarrow \frac{1}{v}x + \frac{c}{v} = y \Rightarrow \frac{1}{v}x + \frac{c}{v} = y$$

$$MH = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = \sqrt{\left(5.5 - \frac{4+7}{2}\right)^2 + \left(-2.5 - \frac{-6+1}{2}\right)^2} = \sqrt{\frac{1}{2} + \frac{1}{2}} = \sqrt{1} = 1$$

$$\frac{a}{a}x + \frac{a'}{a'} = -1 \Rightarrow \frac{m+1}{m-1} \times \frac{m-2}{-a+m} \leq -1 \Rightarrow \frac{m+1}{m-1} \leq \frac{a-m}{m-2} \Rightarrow \frac{m+1}{m-1} \leq \frac{a-m}{m-2}$$

$$L_1 \Rightarrow (m+1)x - (m-2)y + 1 \leq 0 \Rightarrow a \leq \frac{m+1}{m-2}$$

$$L_2 \Rightarrow (m-2)x + (a-m)y - v \leq 0 \Rightarrow a' \leq \frac{m-2}{-a+m}$$

$$m^2 - 13m + 40 = 0 \Rightarrow \Delta < 0$$

برای هیچ مقدار حقیقی m دو خط بر هم عمود نیستند

(امامی سوال) ۸۲