



$$A \begin{vmatrix} -2 \\ K \end{vmatrix}$$

$$B \begin{vmatrix} 2 \\ m \end{vmatrix}$$

$$A \begin{vmatrix} -2 \\ K \end{vmatrix}$$

$$B \begin{vmatrix} 2 \\ -2+K \end{vmatrix}$$

(1)

$$\text{if } M_{AB} = -\frac{1}{f} \Rightarrow \frac{m-k}{\epsilon + \frac{1}{f}} = -\frac{1}{f} \rightarrow m-k = -\frac{\epsilon}{f}$$

$$m = -\frac{\epsilon}{f} + k$$

$$\overline{AB} = \sqrt{(4)^2 + (-3)^2} = \sqrt{16+9} = \sqrt{25} = 5$$

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$$A \begin{vmatrix} -1 \\ \epsilon \end{vmatrix}$$

$$B \begin{vmatrix} 3 \\ 1 \end{vmatrix}$$

$$C \begin{vmatrix} x \\ y \end{vmatrix}$$

$$D \begin{vmatrix} -1-x \\ y+3 \end{vmatrix}$$

P, Q

(2)

$$M_{AB} = M(CD) \rightarrow \frac{3}{-\epsilon} = \frac{-3}{2x+1}$$

$$2x+1 = \frac{3}{\epsilon}$$

$$x = \frac{3}{2\epsilon} - \frac{1}{2}$$

$$M_{AB} \times M(CD) = -1 \rightarrow \frac{3}{-\epsilon} \times \frac{1-y}{3} = -1 \rightarrow y = 2$$

$$C \begin{vmatrix} \frac{3}{\epsilon} \\ -1 \end{vmatrix}$$

$$\overline{AB} = \sqrt{16+9} = 5$$

$$\overline{BC} = \sqrt{\frac{9}{\epsilon^2} + \epsilon^2} = \frac{3}{\epsilon}$$

$$\rightarrow P = \left(\frac{3}{\epsilon}, \frac{3}{\epsilon} \right) = \left(\frac{3}{\epsilon}, \frac{3}{\epsilon} \right)$$

$$x^2 + (x^2 - 1)y = 3$$

(3)

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$$\text{y. n. j.} \Rightarrow \tan \phi = \sqrt{3} \rightarrow \phi = 60^\circ$$

باعت (4)

$$\frac{-a}{b} \rightarrow \frac{-2m}{m^2-1} = \sqrt{3}$$

$$\sqrt{3}m^2 - \sqrt{3} = -2m$$

$$m = \frac{-2 \pm \epsilon}{2\sqrt{3}} \rightarrow 1) \frac{-2}{\sqrt{3}}$$

$$\Delta = \epsilon^2 + \epsilon^2 \sqrt{3} \times \sqrt{3} = 2\epsilon^2$$

$$\frac{-2}{\sqrt{3}} - \frac{1}{\sqrt{3}} = \frac{-3}{\sqrt{3}} = -\sqrt{3}$$

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$$MBC = \frac{11-3}{\sqrt{10}} = \frac{8}{\sqrt{10}} = 2.5$$

(E) 1

$$y = 2x + b \xrightarrow{|x|} x = 2 + b \Rightarrow b = -3$$

$$y = 2x - 3$$

$$y = 2x + 3 \rightarrow A \mid 4$$

BC is A line

$$\frac{|4 - 2 + 3|}{\sqrt{1+4}} = \frac{5}{\sqrt{5}} = \sqrt{5}$$

$$AB: y = -2x + 5 \xrightarrow{x=2} 2y = -4 + 10$$

$$BC: 2y = 2x - 6$$

$$\Rightarrow -4 + 10 = 2x - 6$$

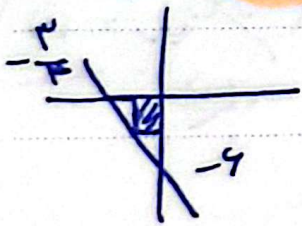
$$B \mid 1 \quad y = 1 \quad \boxed{x = 3} \leftarrow 11x = 33$$

(D)

$$AC: 2y = 2x - 6$$

$$\frac{|6 - 4 - 6|}{\sqrt{5}} = \frac{4}{\sqrt{5}} = \frac{4\sqrt{5}}{5}$$

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$$m = \frac{y}{x} = \frac{-1}{-1} = 1$$

(C)

$$y = -1x + b \xrightarrow{y=0} 0 = -1x + b \Rightarrow b = 1$$

$$x \rightarrow y = 1x - 1$$

$$y = -1x - 1$$

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$$x = -1x - 1 \rightarrow x = -\frac{1}{2}$$

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

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

$$y = ax + 1$$

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

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$$ay = ax + a - 1$$

$$\text{if } a = 1 \rightarrow y = ax + 1 \rightarrow y = x$$

صاف ممکنه

$$\text{if } a = -1 \rightarrow y = -x + 1, y = -x + 2$$

$$\parallel \alpha \rightarrow \text{صاف نمی تونه}$$

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$$\text{if } a = 1 \rightarrow x + 1 = y, y = x \rightarrow y = x - 1, y = x$$

$$\text{فاصله دو خط موازی} = \frac{1}{\sqrt{1}} = \frac{\sqrt{2}}{2} \rightarrow 0^2 - \left(\frac{\sqrt{2}}{2}\right)^2 = \left(\frac{\sqrt{2}}{2}\right)^2$$

$$\frac{1}{\sqrt{2}} = \text{فاصله} \leftarrow \sqrt{2 \cdot 0 - 1} = \frac{1}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{1}{\sqrt{2}}$$

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

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$$d = \frac{|1 \cdot 1 - 1 \cdot 1|}{\sqrt{1^2 + 9}} = \frac{0}{\sqrt{10}} = 0$$

$$MAC = -3 \rightarrow y = -2x + b \xrightarrow{b=2} y = -2x + 1$$

$$3y = x - 1 \rightarrow 3y = -9x + 24 \rightarrow 1 \cdot x = 3y \rightarrow \begin{matrix} x=1 \\ y=3 \end{matrix}$$

$$1/9 - 3/4 \cdot 2 = -2/1 \quad S = \frac{1}{2} \cdot x \cdot 2/1 = 1/1$$

$$\left| \frac{-1}{2} \right|$$

$$\left| \frac{-1}{3} \right|$$

$$\frac{b-a}{\left(-\frac{1}{2} \cdot \frac{1}{3}\right)} = \sqrt{3} \quad \sqrt{\frac{1}{36} (b-a)^2} = \frac{\sqrt{3}}{6}$$



$$\sqrt{\frac{1}{36} + \frac{1}{12}} = \sqrt{\frac{1}{12}} = \frac{1}{2\sqrt{3}} \rightarrow \text{فاصله}$$

$$2 \cdot \frac{1}{2\sqrt{3}} = \frac{1}{\sqrt{3}}$$

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Subject: _____

Date: _____

$$\begin{aligned} & \begin{vmatrix} -r \\ -f \end{vmatrix} \\ & r = \sqrt{r^2 + f^2} = 0 \quad M_O A = M_B \quad (1.) \end{aligned}$$

$$BC \rightarrow y = \frac{f}{r} a + b \xrightarrow{\times r} ry = fa + rb$$

$$r = \frac{|ry - fa + rb|}{\sqrt{r^2}} = 0 \quad |rb| = r^2 \quad b = \frac{r^2}{f} \checkmark$$

$$b = -\frac{r^2}{f} \quad \leftarrow$$

$$BC = y \Rightarrow \frac{f}{r} a + \frac{r^2}{f} \xrightarrow{\times r} ry - fa - r^2 = 0$$

$$AB \rightarrow y = -\frac{f}{r} a + b \quad \begin{vmatrix} -f \\ -f \end{vmatrix}$$

$$b = -\frac{r^2}{f} \quad \leftarrow$$

$$AB \rightarrow \begin{cases} fa + ry + r^2 \\ ry - fa - r^2 \end{cases}$$

$$\rightarrow \begin{aligned} x &= -\frac{-r^2 - 1 \dots}{-12 - 9} = -1 \\ y &= \frac{1 \dots - r^2}{-12 - 9} = -1 \rightarrow xy = 1 \end{aligned}$$