

٢٠

درسها صادره

سوال ١ (٢)

$$m = \frac{y - (-2)}{x - 8} = -\varepsilon \rightarrow y = -\varepsilon x + b \xrightarrow{(8, -2)} -2 = -\varepsilon \cdot 8 + b \Rightarrow y = -\varepsilon x + 11 \quad (الف)$$

ب) m ها یک

$$m = -3 \Rightarrow y = -3x + b \xrightarrow{(8, 2)} 2 = -12 + b \rightarrow y = -3x + 14$$

$$m \times m' = -1 \quad (ج)$$

$$m = -\frac{1}{3} \Rightarrow m' = 3 \quad y = 3x + b \xrightarrow{(8, 2)} 2 = 12 + b \rightarrow y = 3x - 10$$

$$\tan 40^\circ = m = \sqrt{3} \quad y = \sqrt{3}x + b \xrightarrow{(8, 2)} \varepsilon \sqrt{3} + b = 2 \Rightarrow y = \sqrt{3}x + \varepsilon \quad (د)$$

$$d = \sqrt{(5x)^2 + (5y)^2} = \sqrt{(2 - (-1)) + (2 - 5)^2} = \sqrt{9 + 14} = 5$$

سوال ٢ (٢)
(الف)

$$\frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}} = \frac{|(3 \times 2) + (4 \times 5) - 12|}{\sqrt{9 + 16}} = \frac{10}{5} = 2$$

(ب)

$$\varepsilon x + 4y - 1 = 0 \quad \begin{matrix} 2x + 3y - 4 = 0 \\ \times 2 \\ \hline \varepsilon x + 4y - 12 = 0 \end{matrix}$$

سوال ٣

(٢)

b, a
ضرایب

$$\varepsilon x + 4y - 1 = 0 \quad \xrightarrow{\div 2} 2x + 3y - 12 = 0$$

$$c = c' \text{ مینین} \\ = \frac{-1 - 12}{2} = -11.5$$

(ب)

$$\frac{|c - c'|}{\sqrt{a^2 + b^2}} = \frac{|c|}{\sqrt{14 + 34}} = \frac{2}{2\sqrt{3}} = \frac{1}{\sqrt{3}} \times \frac{\sqrt{13}}{\sqrt{13}} = \frac{2\sqrt{13}}{13}$$

سوال ٤

(٢)

$$\frac{|ax + by - c|}{\sqrt{a^2 + b^2}} = \frac{|a'x + b'y - c'|}{\sqrt{(a')^2 + (b')^2}} \rightarrow \frac{|3x - 2y - 1|}{\sqrt{13}} = \frac{|2x + 3y - 3|}{\sqrt{13}}$$

$$3x - 2y - 1 = 2x + 3y - 3 \rightarrow -5y = -x - 2 \Rightarrow 5y = x + 2$$

$$y = \frac{1}{5}x + \frac{2}{5}$$

$$3x - 2y - 1 = -2x - 3y + 3 \rightarrow 5x - 5y = 4 \rightarrow y = x - \frac{4}{5}$$

سوال (۵) ۵

$$\tan \alpha = \left| \frac{m - m'}{1 + mm'} \right| \Rightarrow \tan \alpha = \left| \frac{2}{1 - 4} \right| \Rightarrow \tan \alpha = 1 \Rightarrow \alpha = 45^\circ$$

$\beta = 135^\circ$

$$d = \sqrt{(\Delta x)^2 + (\Delta y)^2} = \sqrt{(-1)^2 + (4)^2} = 1.5$$

$$m \left| \begin{array}{l} \frac{-2+3}{2} = -1 \\ \frac{4-2}{2} = 1 \end{array} \right. \rightarrow m \left| \begin{array}{l} -1 \\ 1 \end{array} \right.$$

$$x_{\text{توسط}} = \frac{-10 - 2 + 3}{3} = -\frac{9}{3} = -3$$

$$y_{\text{توسط}} = \frac{-13 + 3 + 1}{3} = -3$$

سوال (۷) ۵

$$\left| \begin{array}{l} -3 \\ -3 \end{array} \right|$$

تقریباً

$$\begin{array}{ccc|c} -10 & -13 & 1 & (-30 - 2 - 39) + (9 + 24 - 10) \\ -2 & 3 & 1 & \\ 3 & 1 & 1 & \end{array} = 194 = 94 \times \frac{1}{5} = 18.8$$

$$y = \frac{2n+1}{5n-3}$$

$$x + \frac{d}{19} = 1 - \frac{d}{19} \Rightarrow \frac{19}{19}$$

سوال ۸

$$x = \frac{2y+1}{5y-3} \rightarrow 5yx - 3x = 2y+1$$

$$5yx - 2y = 3x+1 \rightarrow y(5n-2) = 3n+1$$

$$14 \frac{2}{19} + \frac{n+8}{19} = \frac{34}{19}$$

$$\Rightarrow y = \frac{3n+1}{5n-2}$$

$$-y = \frac{2n+1}{5n-3}$$

(الف)

$$y = \frac{-2n+1}{-5n-3}$$

(ب) ۵

$$-x = \frac{-2y+1}{-5y-3} \rightarrow 5ny + 3x = -2y+1 \rightarrow 5ny + 2y = -3x+1$$

$$y(5n+2) = -3x+1$$

$$\rightarrow y = \frac{-3x+1}{5n+2}$$

$$y' = y + 3$$

$$4y = y' - 3$$

$$n' = n - 2$$

$$4n = n' + 2$$

$$y' - 3 = \frac{p(n'+2)+1}{(n'+2)-3} \Rightarrow y' = \frac{2n'+1+3n'-3}{n'-1}$$

سوال (۹) (الف) ۵

$$= \frac{5n'+2}{n'-1}$$

۵

$$y' = y - 1 \quad n' = n - 3 \quad \xrightarrow{\text{جواب}} \quad y' + 1 = \frac{2(n' + 3) + 1}{(n' + 3) - 3} = \frac{2n' + 7}{n'}$$

$$\rightarrow y' = \frac{2n' + 7 - 2n'}{n'} = \frac{7}{n'}$$

$$\begin{cases} \cancel{3}n + \epsilon y = 2 \\ (\cancel{3} - 2y = 1) x - 3 \end{cases}$$

$$\underline{19y = -1 \rightarrow y = -\frac{1}{19}, n = -\frac{14}{19}}$$

$$\text{مخرج} = \begin{bmatrix} 3 & \epsilon \\ 1 & -5 \end{bmatrix} = -15 - \epsilon = -19$$

$$\text{مردت } n = \begin{bmatrix} \epsilon & 2 \\ -5 & 1 \end{bmatrix} = \epsilon + 10 = 14$$

$$\text{مردت } y = \begin{bmatrix} 3 & 2 \\ 1 & 1 \end{bmatrix} = 3 - 2 = 1 \quad \left(n = -\frac{14}{19} \right) y = -\frac{1}{19}$$

(ب)

(1)

(5)

(2)