

الن) $m = \frac{y_2 - y_1}{x_2 - x_1} \rightarrow m = \frac{2 - 1}{-1 - 1} = -\frac{1}{2}$, $y = ax + b \xrightarrow{1}$ $2 = -1 + b \rightarrow b = 3$ (1)
 $y = -\frac{1}{2}x + 3$

ب) $2y + 4x = -1 \rightarrow y + 2x = -\frac{1}{2} \rightarrow m = -2 \rightarrow -2 = \frac{y_2 - 2}{x_2 - 1} \rightarrow -2x_2 + 2 = y_2 - 2 \rightarrow y_2 = -2x_2 + 4$
 $y = -2x + 4$

ج) $3x - 1 = y - 2 \rightarrow y = 3x - 1$

د) $m = \tan \frac{\pi}{4} = 1 \rightarrow 1 = \frac{y - 2}{x - 1} \rightarrow x - 1 = y - 2 \rightarrow y = x + 1$

الن) $d = \sqrt{\Delta y^2 + \Delta x^2} \Rightarrow d = \sqrt{16 + 9} = 5$ (2)

ب) $d = \frac{|ax_1 + by_1 + c|}{\sqrt{a^2 + b^2}} \Rightarrow d = \frac{|4 + 12 - 3|}{\sqrt{9 + 16}} = \frac{13}{5} = 2.6$

الن) $2x + 3y = 1 \rightarrow 2x + 3y = 2$, $2x + 3y = 4 \Rightarrow \frac{c + c'}{p} = \frac{4 + 2}{5} = 1.2$ (3)
 $\rightarrow 2x + 3y = 1.2$

ب) $d = \frac{|c - c'|}{\sqrt{a^2 + b^2}} = \frac{2}{\sqrt{13}} \times \frac{\sqrt{13}}{\sqrt{13}} = \frac{2\sqrt{13}}{13}$

ب) $\frac{|ax + by + c|}{\sqrt{a^2 + b^2}} = \frac{|a'x + by + c'|}{\sqrt{a'^2 + b'^2}} \Rightarrow \frac{|2x + 3y - 3|}{\sqrt{13}} = \frac{|3x - 2y - 1|}{\sqrt{13}}$ (4)

$\rightarrow 2x + 3y - 3 = 3x - 2y - 1 \rightarrow 5y - x - 2 = 0$

$\rightarrow 2x + 3y - 3 = -3x + 2y + 1 \rightarrow 5x + y - 4 = 0$

$\tan \alpha = \frac{|m - m'|}{|1 + mm'|} \rightarrow m = 2, m' = 3 \xrightarrow{\text{بجاء}} \frac{2 + 3}{1 - 6} = -1 \rightarrow \tan \alpha = 1$ (5)

$\tan \alpha = 1 \rightarrow \alpha = 45^\circ$
 $\alpha = 225^\circ$

(الف) $d = \sqrt{4 \times 1 \times 4} = 1.$

(4)

(ب) $x = \frac{-5+3}{2} = -1$ و $y = \frac{4-2}{2} = 1$ $\xrightarrow{\text{بہارِ خدا}} M \begin{vmatrix} -1 \\ 1 \end{vmatrix}$

(الف) $x = \frac{-1+3-2}{3} = -\frac{2}{3}$ و $y = \frac{-1 \times 3 + 3 + 1}{3} = -\frac{2}{3}$ (4)

مؤثرات $\begin{vmatrix} -1 \\ -3 \end{vmatrix}$

(ب) $\frac{1}{3} \begin{bmatrix} -1 & -1 & 1 \\ -2 & 3 & 1 \\ 3 & 1 & 1 \end{bmatrix} \Rightarrow \frac{1}{3} (-3 - 3 - 2 - (9 + 3 - 1)) = \frac{1}{3} \times 9 = 3 = \boxed{5}$

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(الف) $-y = \frac{2x+1}{4x-3} \rightarrow y = \frac{2x+1}{3-4x}$ (4)

(ب) $y = \frac{-2x+1}{-4x-3}$

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15 (ب) $x = \frac{2y+1}{4y-3} \rightarrow 4yx - 3x = 2y+1 \rightarrow y(4x-3) = 1+3x \Rightarrow y = \frac{3x+1}{4x-3}$

(د) $-x = \frac{-2y+1}{-4y-3} \rightarrow 4xy + 3x = -2y+1 \rightarrow y(4x+3) = 1-3x \Rightarrow y = \frac{1-3x}{4x+3}$

(الف) $x' = x-2 \Rightarrow x = x'+2$ و $y' = y+3 \Rightarrow y = y'-3$ (4)

20 $y'-3 = \frac{2(x'+2)+1}{x'+2-3} \rightarrow y' = \frac{2x'+5}{x'-1}$

(ب) $x' = x-3 \Rightarrow x = x'+3$, $y' = y-2 \Rightarrow y = y'+2 \Rightarrow y'+2 = \frac{2(x'+3)+1}{(x'+3)-3} \rightarrow y' = \frac{2}{x'}$

(الف) $3x+4y=2$, $3x-10y=3 \xrightarrow{\text{بہارِ خدا}} y = \frac{-1}{19}$, $x = \frac{14}{19}$ (1.)

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(ب) $x = \frac{-\begin{bmatrix} 3 & 2 \\ -5 & 1 \end{bmatrix}}{\begin{bmatrix} 4 & 4 \\ 1 & -5 \end{bmatrix}}$, $y = \frac{\begin{bmatrix} 3 & 2 \\ 1 & 1 \end{bmatrix}}{\begin{bmatrix} 3 & 4 \\ 1 & -5 \end{bmatrix}} \Rightarrow x = \frac{14}{9}$, $y = \frac{-1}{19}$