

الف: $\frac{2-(-2)}{4-5} = \frac{4}{-1} = -4$ $y = -4x + b$ $2 = -4 \times 4 + b$ $b = 18$ $y = -4x + 18$ ✓

(۲)

ب: $2y = -6x - 1$ $y = -3x - \frac{1}{2}$ $y = -3x + b$ $2 = -3 \times 4 + b$ $b = 14$ $y = -3x + 14$ ✓

ج: $3y = -x + 1$ $y = -\frac{x}{3} + \frac{1}{3}$ $y = 3x + b$ $2 = 3 \times 4 + b$ $b = -10$ $y = 3x - 10$ ✓

د: $y = \sqrt{3}x + b$ $2 = \sqrt{3} \times 4 + b$ $b = 2 - 4\sqrt{3}$ $y = \sqrt{3}x + 2 - 4\sqrt{3}$ ✓

الف: $\sqrt{(4-3)^2 + (-1-2)^2} = 5$ ✓

(۲)

ب: $3x + 4y - 3 = 0$

$\frac{|3 \times 2 + 4 \times 3 - 3|}{\sqrt{9+16}} = \frac{15}{5} = 3$ ✓

الف: $2x + 3y = 4$
 $2x + 3y = 9$

$2x + 3y = \frac{4+9}{2}$

$2x + 3y = 6.5$ ✓

(۲)

ب: $\frac{|9-4|}{\sqrt{4+9}} = \frac{5}{\sqrt{13}}$ ✓

$3x - 2y - 1 = 0$

$2x + 3y - 3 = 0$

$\frac{|3x - 2y - 1|}{\sqrt{13}} = \frac{|2x + 3y - 3|}{\sqrt{13}}$

$3x - 2y - 1 = 2x + 3y - 3$

$x - 5y = -2$ ✓

$3x - 2y - 1 = -2x - 3y + 3$

$5x + y = 4$ ✓

(۲)

$y = -3x + 3$

$y = 2x + 5$

$\tan \alpha = \left| \frac{2-(-3)}{1+(-6)} \right| = \left| \frac{5}{-5} \right| = 1$

(۲)

$\alpha = \frac{\pi}{4}$ ✓

الف: $\sqrt{(4-(-2))^2 + (-5-3)^2} = 10 \checkmark$

(2)

ب: $\frac{-5+3}{4} = -1$

$\frac{4-2}{4} = 1$

$\begin{bmatrix} -1 \\ 1 \end{bmatrix} \checkmark$

الف: $\frac{-10-2+3}{4} = -3 \quad \frac{-13+3+1}{4} = -3 \quad \begin{bmatrix} -3 \\ -3 \end{bmatrix} \checkmark$

(2)

ب: $\frac{1}{4} \begin{vmatrix} -10 & -2 & 3 \\ -13 & 3 & 1 \\ 1 & 1 & 1 \end{vmatrix} \quad -10(-2)(3) + 10(-2)(1) + 10(-2)(1) = -99 \rightarrow 99$
 $99 \times \frac{1}{4} = 24.75 \checkmark$

(1.5)

بـ بر حسب

ن بنویس!

الف: $-y = \frac{2x+1}{4x-3} \checkmark$

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

ب: $y = \frac{-2x+1}{-4x-3} \checkmark$

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

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

(2)

ب: $x' = x-3 \quad x = x'+3 \quad y' = y-2 \quad y = y'+2$
 $y'+2 = \frac{2(x'+3)+1}{x'+3-3} = \frac{2x'+7}{x'} \rightarrow y' = \frac{2x'+7}{x'} - 2$

الف: $\begin{cases} 3x+4y=2 \\ -3x+12y=-3 \end{cases} \rightarrow 19y=-1 \quad y = -\frac{1}{19} \checkmark \quad x = \frac{15}{19} \checkmark$

(2)

ب: $x = -\frac{\begin{vmatrix} 4 & 2 \\ -3 & 1 \end{vmatrix}}{\begin{vmatrix} 3 & 4 \\ -3 & 12 \end{vmatrix}} = \frac{15}{19} \checkmark$

$y = \frac{\begin{vmatrix} 3 & 2 \\ -3 & 1 \end{vmatrix}}{\begin{vmatrix} 3 & 4 \\ -3 & 12 \end{vmatrix}} = -\frac{1}{19} \checkmark$

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