

الف	$\frac{2-2}{5-4} = -4$ $y = -4x + b$ $2 = -4(4) + b \Rightarrow b = 18$ $y = -4x + 18 \checkmark$	۱, ۵
ب	$2y + 4x = 18 \checkmark$ $y = -\frac{1}{2}x + \frac{9}{2}$ $m = -\frac{1}{2}$ $m' = 2$ $(4, 2) \rightarrow y - 2 = 2(x - 4) \rightarrow y = 2x - 6$	۱
الف	$\frac{ 2 \times 2 + 6 \times 2 - 18 }{\sqrt{14+9}} = \frac{10}{5} = 2 \checkmark$	۲
الف	$\sqrt{(2-(-1))^2 + (3-7)^2} = 5 \checkmark$	۲
الف	$2x + 3y = 4$ $2x + 3y = 8$ $2x + 3y = 0 \checkmark$	۱
ب	$d = \frac{ C - C' }{\sqrt{a^2 + b^2}} = \frac{ 12 - 11 }{\sqrt{14 + 13}} = \frac{1}{\sqrt{27}}$	۳
الف	$\frac{2x - y - 1}{\sqrt{13}} \pm \frac{2x + 3y - 3}{\sqrt{13}}$ $2x - y - 1 = 2x + 3y - 3 \Rightarrow x - 4y + 2 = 0 \checkmark$ $2x - y - 1 = -(2x + 3y - 3) \Rightarrow 4x + y - 4 = 0 \checkmark$	۲
ب	$m_1 = -2$ $m_2 = 2$ $\frac{2 - (-2)}{1 + (-4)} = -1 = \tan(\alpha)$ $\alpha = 135^\circ$	۲

$$\sqrt{(-0-3)^2 + (-2-4)^2} = 10 \checkmark$$

الف

(2)

$$\left| \frac{3+(-0)}{2} \right| = \left| -1 \right| \checkmark$$

6

$$\begin{vmatrix} -1 & -2 & 3 \\ -1 & 3 & 1 \\ 1 & 1 & 1 \end{vmatrix} = -3 - 2 - 3 - 9 + 1 = -16$$

$$\begin{vmatrix} -1 & -2 & 3 \\ -1 & 3 & 1 \\ 1 & 1 & 1 \end{vmatrix} = -16$$

الف

(1, 1.75)

7

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

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

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

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

الف

(2)

8

$$x' = x-2 \quad x = x'+2$$

$$y' = y+3 \quad y = y'-3$$

الف

(1.75, 2)

9

$$x' = x-3 \quad x = x'+3$$

$$y' = y-2 \quad y = y'+2$$

$$y' = y-2 \quad y = y'+2$$

الف

(2)

10

$$2x + 5y = 2$$

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$$x = \frac{2(-5) - (-2)(2)}{2(-5) - 5(2)} = \frac{14}{19}$$

$$y = \frac{2(1) - 2(0)}{19} = \frac{-1}{19}$$