

الف	$\frac{2-2}{5-4} = -4$ $y = -4x + b$ $2 = -4(4) + b \Rightarrow b = 18$ $y = -4x + 18$	ب	$2y + 4x = 18$	ج	$x - 2y = -2$	د	$y = \tan \frac{\pi}{3} x + b$ $2 = \sqrt{3} \left(\frac{4}{3} \right) + b \Rightarrow b = 2 - \frac{4\sqrt{3}}{3}$ $y = \sqrt{3}x + 2 - \frac{4\sqrt{3}}{3}$	۱
الف	$\sqrt{(2 - (-1))^2 + (3 - 7)^2} = 5$				$\frac{ 2 \times 2 + 4 \times 3 - 18 }{\sqrt{14+9}} = \frac{10}{5} = 2$			۲
الف	$2x + 3y = 4$ $2x + 3y = 4$ $2x + 3y = 0$	خط واصل	$2x + 3y = \frac{4+4}{2}$ $2x + 3y = 4$					۳
	$\frac{3x - 2y - 1}{\sqrt{13}} \pm \frac{2x + 3y - 3}{\sqrt{13}}$		$3x - 2y - 1 = 2x + 3y - 3$ $x - 5y + 2 = 0$ $3x - 2y - 1 = -2x - 3y + 3$ $5x + y - 4 = 0$					۴
	$m_1 = -3$ $m_2 = 2$ $\frac{2 - (-3)}{1 + (-6)} = -1 = \tan(\alpha)$ $\alpha = 135^\circ$		$135^\circ, 45^\circ$ 135° 45°					۵

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

الف

٦

$$\left| \begin{array}{c} 3+(-0) \\ -2+4 \end{array} \right| = \left| \begin{array}{c} -1 \\ 1 \end{array} \right|$$

الف

٧

$$\left| \begin{array}{ccc} -1 & -2 & 3 \\ -13 & 3 & 1 \\ 1 & 1 & 1 \end{array} \right| = -30 - 2 \cdot 39 - 9 + 1 \cdot 12 = -54$$

$$\frac{1}{3} |-54| = 18$$

$$\left| \begin{array}{c} -10-2+3 \\ -13+3+1 \end{array} \right| = \left| \begin{array}{c} -9 \\ -9 \end{array} \right|$$

الف

٨

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

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

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

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

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

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

الف

٩

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

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

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

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

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

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

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

الف

١٠

$$2x+5y=2$$

$$x-5y=1$$

$$x = \frac{2(1)-(-5)(2)}{2(-5)-5(1)} = \frac{12}{-15} = -\frac{4}{5}$$

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

$$2x+5y=2$$

$$2x-15y=3$$

$$19y = -1$$

$$y = -\frac{1}{19}$$

$$x = \frac{\frac{2}{19} + 2}{2} = \frac{12}{19}$$