

$$\text{الف) } x' = x - 1 \quad y' = y + 1$$

$$x = x' + 1 \quad y = y' - 1$$

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

$$\text{ب) } x' = x - 1 \Rightarrow x = x' + 1, \quad y' = y + 1 \Rightarrow y = y' - 1$$

$$y' + 1 = \frac{1(x' + 1) + 1}{(x' + 1) - 1} \rightarrow y' = \frac{1x' + 1 - 1}{x'} \rightarrow y' = \frac{1}{x'}$$

الن

$$\begin{cases} 1x + 1y = 1 \\ 1x - 1y = 1 \end{cases} \rightarrow 19y = -1 \rightarrow y = \frac{-1}{19} \Rightarrow$$

$$\frac{-1}{19} + 1 = x \rightarrow x = \frac{18}{19}$$

$$\text{ب) } x = - \begin{bmatrix} 1 & 1 \\ -1 & 1 \end{bmatrix}$$

$$-10 - 18 = -28 \leftarrow \begin{bmatrix} 1 & 1 \\ 1 & -1 \end{bmatrix}$$

$$y = \begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix}$$

$$x = \frac{18 + 1}{-10 - 18} = \frac{19}{-28}$$

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

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$$\cos \alpha = \frac{|m - m'|}{1 + mm'} \Rightarrow m = 2, m' = 3 \rightarrow$$

$$\cos \alpha = \frac{2 \cdot 3}{1 + 6} = 1 \rightarrow \alpha = 0^\circ \checkmark$$

$$\alpha = 210^\circ \text{ قوس}$$

الف) $d = \sqrt{4x + 3y} = 10$

ب) $x = \frac{-d + 10}{2} = -1$, $y = \frac{1 - x}{2} = 1 \rightarrow M = (-1, 1)$

الف) $x = \frac{-10 + 3 - 2}{3} = -3$, $y = \frac{-13 + 3 + 1}{3} = -3$

ب) $x = \frac{-10 + 3 - 2}{3} = -3$, $y = \frac{-13 + 3 + 1}{3} = -3$

$\Rightarrow$ مركز الدائرة $(-3, -3)$

الف) $\begin{bmatrix} -10 & -13 & 1 \\ -2 & 3 & 1 \\ 3 & 1 & 1 \end{bmatrix}$

$$-30 - 39 - 2 = -71$$

$$9 + 24 - 10 = 23 \rightarrow \text{س} -71 - 23 \text{ س} 94$$

$$94 \times \frac{1}{2} = 47$$

الف) $-y = \frac{2m+1}{km-3} \rightarrow y = \frac{2m+1}{3-km}$

ب) $y = \frac{-2m+1}{-km-3}$

ج) $x = \frac{ky+1}{ky-2} \rightarrow kym - km - ky = 1 \rightarrow y(km-2) = 1+km$

$\rightarrow y = \frac{km+1}{km-2}$

د) $-x = \frac{-ky+1}{-ky-2} \rightarrow kmy + km = -ky+1 \rightarrow y(km+2) = 1-km$

$\rightarrow y = \frac{1-km}{km+2}$

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مکملہ: ۱۵: ۹

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الف) $m = \frac{y_2 - y_1}{x_2 - x_1} \rightarrow m = \frac{14 - 2}{-1 - 4} = -\frac{12}{5}$ و $y = ax + b$ (۴، ۲) $\rightarrow$
 $2 = -14 + b \Rightarrow b = 16$
 $\rightarrow y = -\frac{12}{5}x + 16$

ب) $2y + 4m = 1 \rightarrow m = -\frac{1}{2} \rightarrow -\frac{1}{2} = \frac{y_2 - y_1}{x_2 - x_1}$

$-\frac{1}{2}m + 14 = y_2 - 2 \rightarrow y = -\frac{1}{2}m + 16$

ج) $mm' = -1 \rightarrow m' = \frac{1}{m} \rightarrow \frac{1}{m} = \frac{y_2 - y_1}{x_2 - x_1}$

$\frac{1}{m} = \frac{14 - 2}{-1 - 4} \rightarrow y = \frac{1}{m}x + 16$

د) $m = \tan \frac{\pi}{3} = \sqrt{3} \rightarrow \sqrt{3} = \frac{y_2 - y_1}{x_2 - x_1} \rightarrow \sqrt{3}m - 14\sqrt{3} + 2 = y$

الف) $d = \sqrt{(y_2 - y_1)^2 + (x_2 - x_1)^2} \rightarrow d = \sqrt{14^2 + 9^2} = 16.5$

ب) $d = \frac{|am_1 + by_1 + c|}{\sqrt{a^2 + b^2}} \rightarrow d = \frac{|1 + 14 - 14|}{\sqrt{1 + 14}} = \frac{1}{\sqrt{15}}$

الف) $km + 4y = 1 \rightarrow km + 4y = k$, $km + 4y = 9 \rightarrow \frac{C+C}{2} \rightarrow k = \frac{9+k}{2}$ حل
 $\rightarrow km + 4y = 5$

ب) $d = \frac{|C - C'|}{\sqrt{a^2 + b^2}} = \frac{1}{\sqrt{15}} = \frac{2\sqrt{15}}{15}$

$|ax_1 + by_1 + c| = \frac{|am_1 + by_1 + c|}{\sqrt{a^2 + b^2}} \rightarrow \frac{|km + 4y - k|}{\sqrt{15}} = \frac{|km + 4y - 1|}{\sqrt{15}}$

$km + 4y - k = km + 4y - 1 \rightarrow 4y - k = -1$

$km + 4y - k = -km + 4y + 1 \rightarrow 2km + 4y - k = 1$

s.a.m