

الف) $m = \frac{\varepsilon}{-1} = -\varepsilon \rightarrow -\varepsilon(x) + b = 2 \rightarrow y = -\varepsilon x + 11$
 $b = 11$

ب) $2y + 4x = 1 \rightarrow y = -2x - \frac{1}{2} \rightarrow m_1 = m_2$

$\rightarrow m = -2 \rightarrow -2(x) + b = 2 \rightarrow b = 14 \rightarrow y = -2x + 14$

ج) $-\frac{1}{\mu}x - \frac{1}{\mu} = y \rightarrow m' = 3 \rightarrow 3(x) + b = 2 \rightarrow y = 3x - 10$
 $\hookrightarrow b = -10$

د) $\frac{\pi}{3} = 60^\circ \rightarrow \tan 60^\circ = \sqrt{3} = m \rightarrow \sqrt{3}(x) + b = 2 \rightarrow y = \sqrt{3}x + 2 - 4\sqrt{3}$
 $\hookrightarrow b = 2 - 4\sqrt{3}$

الف) $d = \sqrt{9+16} = 5$

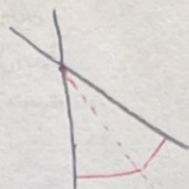
ب) $\frac{|9+16-3|}{\sqrt{9+16}} = \frac{12}{5} = \mu$

الف) $\begin{cases} \varepsilon x + 4y = 1 \\ 2x + 3y = 4 \end{cases} \rightarrow m = -\frac{2}{3} \rightarrow 2x + 3y = 5 \rightarrow -\frac{2}{3}x + \frac{5}{3} = y$

ب) $\frac{|c-c'|}{\sqrt{a^2+b^2}} \Rightarrow \frac{|4-3|}{\sqrt{1+9}} = \frac{1}{\sqrt{10}} = \frac{1\sqrt{10}}{10}$

$$r_m - ry = 1 \rightarrow y = \frac{r}{m}x - \frac{1}{r}$$

$$r_m + ry = r \rightarrow y = -\frac{r}{m}x + 1$$



$$|kx + ry - r| = |kx - ry - 1|$$

$$\begin{cases} 2x + r = 2y \\ 2x + y = r \end{cases}$$

$$2x + y = r$$

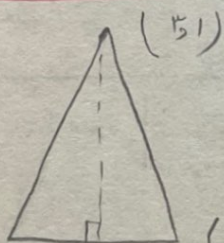
$$\tan \alpha = \frac{|m - m'|}{1 + mm'} \rightarrow \frac{|r + r|}{1 - r^2} = \frac{2r}{1 - r^2}$$

$$\alpha = 45^\circ$$

$$\text{الف) } d = \sqrt{4r^2 + r^2} = 10$$

$$\begin{aligned} (-2, 4) (x, y) (r, -r) &\rightarrow \frac{-2+r}{r} = -1 = x \\ \frac{r-4}{r} = 1 = y &\Rightarrow \boxed{(-1, 1)} \end{aligned}$$

الف)



$$x = \frac{r + (-10) - r}{r} = -r$$

$$\Rightarrow \boxed{(-5, -3)}$$

$$y = \frac{r + (-1) - r}{r} = -r$$

$$(-1, -13) \rightarrow m_1 = \frac{14}{1} = 14 \rightarrow r_m + v = y$$

$$\text{الف) } d = \sqrt{4r^2 + r^2} = \sqrt{r^2}$$

$$\text{ارتفاع} = \sqrt{(1, 4)^2 + (9, 4)^2} = \sqrt{96, 16} \rightarrow$$

$$S = \frac{1}{r} \begin{vmatrix} r & 1 & 1 \\ -r & r & 1 \\ -10 & -1r & 1 \end{vmatrix} = 18$$

$$S = \frac{\sqrt{r^2 \times 96, 16}}{r}$$

$$m_r = -\frac{1}{r}$$

$$-\frac{1}{r}(r) + b = 1 \rightarrow y = -\frac{1}{r}x + \frac{b}{r} \rightarrow -\frac{1}{r}x + \frac{b}{r} = r_m + v$$

$$\hookrightarrow b = \frac{b}{r}$$

$$\frac{b}{r}x = \frac{4}{r} \rightarrow x = 1, 8 \rightarrow y = 10, 4$$

(الف)

$$y = \frac{-2x-1}{-5x+2}$$

$$-y = \frac{2x+1}{5x-2} \rightarrow y = \frac{-2x-1}{5x-2}$$

(أ)

$$y = \frac{-2x+1}{-5x-2}$$

(ج)

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

(1)

$$\rightarrow y = -\frac{2x+1}{5x-2} \rightarrow y = \frac{-2x-1}{5x-2}$$

$$-x = \frac{-2y+1}{-5y-2} \rightarrow y = \frac{-2x+1}{5x+2}$$

(الف)

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

$$x = x' + 2$$

$$y = y' - 2$$

(ب)

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

$$x = x' + 2$$

$$y = y' + 2$$

$$y' + 2 = \frac{2x' + 1}{x'}$$

$$y' = \frac{2x' + 1}{x'}$$

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

$$y' = \frac{2x' + 1}{x'}$$

(الف)

$$\begin{cases} 2x + 5y = 2 \\ 2x - 19y = 2 \end{cases}$$

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

(10)

(1)

(ب)

$$x = \frac{-\begin{vmatrix} 2 & 1 \\ 2 & -19 \end{vmatrix}}{\begin{vmatrix} 2 & 5 \\ 2 & -19 \end{vmatrix}} = \frac{18}{19}$$

$$y = \frac{\begin{vmatrix} 2 & 2 \\ 2 & 2 \end{vmatrix}}{\begin{vmatrix} 2 & 5 \\ 2 & -19 \end{vmatrix}} = -\frac{1}{19}$$