

الف) $A(2, -4)$ $B(5, -2)$ $C(1, 3)$ $D(4, 1)$ $E(2, 1)$ $F(3, 2)$ $G(4, 3)$ $H(5, 4)$ $I(6, 5)$ $J(7, 6)$ $K(8, 7)$ $L(9, 8)$ $M(10, 9)$ $N(11, 10)$ $O(12, 11)$ $P(13, 12)$ $Q(14, 13)$ $R(15, 14)$ $S(16, 15)$ $T(17, 16)$ $U(18, 17)$ $V(19, 18)$ $W(20, 19)$ $X(21, 20)$ $Y(22, 21)$ $Z(23, 22)$ $A'(2, 3)$ $B'(5, 4)$ $C'(1, 4)$ $D'(4, 5)$ $E'(2, 4)$ $F'(3, 5)$ $G'(4, 6)$ $H'(5, 7)$ $I'(6, 8)$ $J'(7, 9)$ $K'(8, 10)$ $L'(9, 11)$ $M'(10, 12)$ $N'(11, 13)$ $O'(12, 14)$ $P'(13, 15)$ $Q'(14, 16)$ $R'(15, 17)$ $S'(16, 18)$ $T'(17, 19)$ $U'(18, 20)$ $V'(19, 21)$ $W'(20, 22)$ $X'(21, 23)$ $Y'(22, 24)$ $Z'(23, 25)$

الف) $\sqrt{25} \rightarrow \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} \rightarrow \sqrt{(2 - 5)^2 + (-4 - (-2))^2} \rightarrow \sqrt{9 + 4} = \sqrt{13}$

ب) $\frac{|ax + by + c|}{\sqrt{a^2 + b^2}} \rightarrow \frac{|4x + 3y - 12|}{\sqrt{16 + 9}} = \frac{12}{5}$

الف) $C' = \frac{C + C'}{2} \rightarrow \frac{12 + 12}{2} = 12$

ب) $\frac{|C - C'|}{\sqrt{a^2 + b^2}} \rightarrow \frac{|12 - 12|}{\sqrt{16 + 9}} = \frac{0}{5} = 0$

الف) $\frac{|ax + by + c|}{\sqrt{a^2 + b^2}} \rightarrow \frac{|4x + 3y - 12|}{\sqrt{16 + 9}} = \frac{12}{5}$

الف) $\frac{|m - m'|}{1 + mm'} \rightarrow \frac{1 - (-\frac{1}{2})}{1 - \frac{1}{2}} = \frac{3/2}{1/2} = 3 \rightarrow \tan^{-1} 3 \approx 71.5^\circ$

$$A(3, -2)$$

$$B(-5, 4)$$

الف) $\sqrt{(x-x')^2 + (y-y')^2} \rightarrow \sqrt{1^2 + 4^2} = \sqrt{17}$

ب) $\mu = \left(\frac{x+x'}{2}, \frac{y+y'}{2} \right)$

ج) $\rightarrow \left(\frac{3-5}{2}, \frac{-2+4}{2} \right) \rightarrow (-1, 1)$

$$A(3, 1)$$

$$B(-2, 3)$$

الف) $\mu = \left(\frac{x_1+x_2+x_3}{3}, \frac{y_1+y_2+y_3}{3} \right)$
 $\rightarrow \left(\frac{3-2-6}{3}, \frac{1+3-13}{3} \right) \rightarrow \left(\frac{-5}{3}, \frac{-9}{3} \right) \rightarrow (-1.67, -3)$

$$C = \frac{1}{2} \begin{bmatrix} 3 & 1 & 1 \\ -2 & 3 & 1 \\ -1 & -1 & 1 \end{bmatrix} = \begin{bmatrix} 1.5 & 0.5 & 0.5 \\ -1 & 1.5 & 0.5 \\ -0.5 & -0.5 & 0.5 \end{bmatrix}$$

ب) استفاده از درخت میانی
 $\rightarrow \begin{bmatrix} 3 & 1 & 1 \\ -2 & 3 & 1 \\ -1 & -1 & 1 \end{bmatrix} \rightarrow \begin{bmatrix} 3 & 1 & 1 \\ -2 & 3 & 1 \\ -1 & -1 & 1 \end{bmatrix} \rightarrow \begin{bmatrix} 3 & 1 & 1 \\ -2 & 3 & 1 \\ -1 & -1 & 1 \end{bmatrix} \rightarrow \begin{bmatrix} 3 & 1 & 1 \\ -2 & 3 & 1 \\ -1 & -1 & 1 \end{bmatrix}$

$$y = \frac{2x+1}{5x-3}$$

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

$$(y' - 3) = 2(x' + 1)$$

ب) $x - 2y = 1$
 $y - 2 = 2y' \rightarrow y' = \frac{y-2}{2}$

$$y' = \frac{y-2}{2}$$

$$\begin{cases} x + y = 1 \\ x - y = 1 \end{cases}$$

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

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

نشان دهنده کامل از دسترس نبود