
1902. 1. 15

$$5x_1 + 7x_2 + 3x_3 = 250$$

$$4x_1 + 6x_2 + 2x_3 = 200$$

$$8x_1 + 5x_2 + 9x_3 = 350$$

$$X_1 = \begin{vmatrix} 250 & 7 & 3 \\ 200 & 6 & 2 \\ 350 & 5 & 9 \end{vmatrix}$$

5	7	3
4	6	2
8	5	9

$$= \frac{(13500 + 4400 + 3000) - (6300 + 12600 + 2500)}{+60} = (144$$

$$(270 + 112 + 60) - (144 + 252 + 50)$$

$$= \frac{21400 - 21400}{442 - 446} = \frac{0}{-4} = 0$$

$$x_2 = \begin{vmatrix} 5 & 250 & 3 \\ 4 & 200 & 2 \\ 8 & 350 & 9 \end{vmatrix}$$

5	7	3
4	6	2
8	5	9

$$(9000 + 4000 + 4200) - (4800 + 9000 + 3500)$$

$$\frac{9000 + 3500}{(270 + 112 + 60) - (144 + 252 + 450)}$$

$$-\frac{100}{5} = -25$$

$$X^{-3} = \begin{vmatrix} 5 & 7 & 250 \\ 4 & 6 & 200 \\ 8 & 5 & 350 \end{vmatrix}$$

5	7	3
4	6	2
8	5	9

$$= (10500 + 11200 + 5000) - (12000 + 9800 + 5000)$$

$$(270 + 112 + 60) - (144 + 252)$$

$$= \frac{-100}{-4} = 25$$

25 فروردین ۱۳۵۸

السؤال الثاني (٤٠ درجة)

$$A = \begin{vmatrix} 1 & -1 & 3 & 1 \\ 2 & 5 & 2 & -6 \\ 3 & -3 & 0 & 5 \\ 4 & 1 & 7 & 1 \end{vmatrix}$$

$$A = -(-1) \begin{vmatrix} 2 & 2 & -6 \\ 3 & 0 & 5 \\ 4 & 1 & 1 \end{vmatrix} + (5) \begin{vmatrix} 1 & 3 & 1 \\ 3 & 0 & 5 \\ 4 & 7 & 1 \end{vmatrix}$$

(30)

$$-(-3) \begin{vmatrix} 1 & 3 & 1 \\ 2 & 2 & -6 \\ 4 & 7 & 1 \end{vmatrix} + (1) \begin{vmatrix} 1 & 3 & 1 \\ 2 & 2 & -6 \\ 3 & 0 & 5 \end{vmatrix}$$

نخرج قيمة المحدد بالترتيب :

(10)

$$+ 2 \begin{vmatrix} 0 & 5 \\ 7 & 1 \end{vmatrix} - 3 \begin{vmatrix} 2 & -6 \\ 7 & 1 \end{vmatrix} + 4 \begin{vmatrix} 2 & -6 \\ 0 & 5 \end{vmatrix} + 5 \left[+1 \begin{vmatrix} 0 & 5 \\ 7 & 1 \end{vmatrix} - 3 \begin{vmatrix} 3 & 1 \\ 7 & 1 \end{vmatrix} + 4 \begin{vmatrix} 3 & 1 \\ 0 & 5 \end{vmatrix} \right] + 3 \left[+1 \begin{vmatrix} 2 & -6 \\ 7 & 1 \end{vmatrix} - 2 \begin{vmatrix} 3 & 1 \\ 7 & 1 \end{vmatrix} + 4 \begin{vmatrix} 3 & 1 \\ 2 & -6 \end{vmatrix} \right] + 1 \begin{vmatrix} 2 & -6 \\ 0 & 5 \end{vmatrix} - 2 \begin{vmatrix} 3 & 1 \\ 0 & 5 \end{vmatrix} + 3 \begin{vmatrix} 3 & 1 \\ 2 & -6 \end{vmatrix}] = -162 + 185 - 84 - 80 = -141$$

السؤال الثالث (٢٠ درجة)

$$\textcircled{1} \frac{(x+y)^2 (x+y)^4}{(x+y)^2} = \frac{(x+y)^{2+4}}{(x+y)^2} = \frac{(x+y)^6}{(x+y)^2} = (x+y)^4$$

$$\textcircled{2} \frac{(-x+y)^5 (x-y)^3}{(x+y)} = \frac{-1^5 (x-y) (x-y)^3}{x-y} = \frac{-1^5 (x-y)^2 (x-y)^3}{x-y} = -1^5 (x-y)^2 (x-y)^2 = -1^5 (x-y)^4 = -x+y$$