

الف) $9x^2 - 5x - 9 = 0 \rightarrow x^2 - 5x - 9 = 0 \rightarrow (x-4)(x+1) \rightarrow \frac{4}{1}, \frac{-1}{1} = \frac{3}{2}, \frac{-2}{3} = 1$

ب) $3x^2 - 1x - 3 = 0 \rightarrow x^2 - 1x - 9 = 0 \rightarrow (x+1)(x-4) \rightarrow \frac{4}{3}, \frac{-1}{3}$

ج) $4x^2 - 4x - 3 = 0 \rightarrow x^2 - 4x - 12 = 0 \rightarrow (x+2)(x-6) \rightarrow \frac{2}{4}, \frac{6}{4} \rightarrow \frac{1}{2}, \frac{3}{2}$

د) $2x^2 - 5x - 12 = 0 \rightarrow x^2 - 5x - 24 = 0 \rightarrow (x-1)(x+4) \rightarrow \frac{4}{2}, \frac{1}{2}$

الف) $x^2 - 5x - 14 = 0$ جعلنا $(x+2)(x-7) \rightarrow -2, +7$

ب) $2x^2 + 5x + 3 = 0$ $a+c=b \rightarrow -1, C/a \rightarrow -1, -\frac{3}{2}$

ج) $x^2 + 2x + 3 = 0$ $\Delta = b^2 - 4ac$ $\frac{-b \pm \sqrt{\Delta}}{2a} \rightarrow \frac{-2 \pm \sqrt{4 - (4 \times 1 \times 3)}}{2}$

$\Delta < 0 \Rightarrow$ لا حلا لـ $\Delta = 0 \Rightarrow$ حلا واحدا
جاءوا في جبال لاذة

د) $3x^2 + 3x - 2 = 0$ $\Delta = 9 - (4 \times 3 \times -2) \rightarrow \frac{-3 \pm \sqrt{9 - (4 \times 3 \times -2)}}{6} \rightarrow \frac{-3 + \sqrt{33}}{6}, \frac{-3 - \sqrt{33}}{6}$

$A \times B = \{(1,2), (1,3), (2,2), (2,3), (3,2), (3,3)\}$

$B^T = \{(2,2), (2,3), (3,2), (3,3)\} \Rightarrow A \times B - B^T = \{(1,2), (1,3)\} = 2$

الف) $F(x) = \{(3, m^2), (2, 1), (-3, m), (-2, m), (3, m+2), (m+4)\}$

$\Rightarrow m^2 = m+2 \rightarrow m^2 - m - 2 = 0 \rightarrow m = 2, -1$

if $\rightarrow m=2 \Rightarrow (3, 4), (2, 1), (-3, 2), (-2, 2), (3, 4), (2, 4) \Rightarrow m \neq 2$

if $\rightarrow m=-1 \Rightarrow (3, 1), (2, 1), (-3, -1), (-2, -1), (3, 1), (-1, 4)$ جاء السلك

الف) $\sqrt[3]{g} + x^2 = 2x - 2$

$$\sqrt[3]{g_1} + x^2 = 2x - 2 \Rightarrow \sqrt[3]{g_1} = \sqrt[3]{g_2}$$

$$\sqrt[3]{g_2} + x^2 = 2x - 2$$

$$g_1 = g_2$$

جواب

$$g = (2x - 2 - x^2)^3$$

$$\left. \begin{aligned} g_1^3 + 2g_1 &= 2x \\ g_2^3 + 2g_2 &= 2x \end{aligned} \right\} g_1^3 - g_2^3 = 2g_1 - 2g_2$$

$$(g_1 - g_2)(g_1^2 + g_1g_2 + g_2^2) = -2(g_1 - g_2)$$

$$(g_1 - g_2)(g_1^2 + g_1g_2 + g_2^2 + 2) = 0$$

$$\downarrow 0 \rightarrow g_1 = g_2$$

$$g_1 = \frac{-g_2 \pm \sqrt{\Delta}}{2}$$

$$\Delta = g_2^2 - 4(g_2^2 + 2) = g_2^2 - 4g_2^2 - 8 = -3g_2^2 - 8$$

$$\Delta = -3g_2^2 - 8 < 0$$

← (9)

$$x=0 \Rightarrow 0 \times \sin y = g \times \sin 0 \quad \sin 0 = 0 \quad \text{حيث} \Rightarrow 0 = 0$$

(10)

الف) - المين، ابطه به اذى هـ مقدار و داللت - جامع x

$$\sqrt{\frac{x}{y}} + \sqrt{\frac{y}{x}} = 2 \Rightarrow 2 = \frac{x}{y} + \frac{y}{x} + 2 \times \left(\sqrt{\frac{x}{y}} \times \sqrt{\frac{y}{x}} \right) \Rightarrow 2 - 2 = \frac{x^2 + y^2}{xy}$$

$$2 = \frac{x^2 + y^2}{xy} \Rightarrow x^2 + y^2 - 2xy = 0 \Rightarrow (x - y)^2 = 0 \Rightarrow \underline{x = y} \quad \text{جامع هـ هنا} \checkmark$$