

$$f(m) = (m+1)^2 + (2m-1)^2 + m^2 + 11m + mn \quad (نقطه)$$

$$g(m) = \{(2, m), (m^2, 1), (p+2, -1), (-9, p+1)\} \quad m+n, p+k?$$

$$\begin{aligned} & \rightarrow 2^2 + 1 + 2m + 9m^2 + 1 - 9m + m^2 + 11m + mn \\ & 1 - 9m - 9m^2 + 2 + m^2 + 11m + mn \\ & \Rightarrow m = -1 \\ & n = 2 \end{aligned} \quad \left\{ \begin{array}{l} p+1 = -1 \Rightarrow p = -1 \\ p+k = -1 \\ -1+k = -1 \Rightarrow k = 0 \end{array} \right.$$

$$\Rightarrow (-1) + (2) + (-1) + (1) = -5$$

$$الف) y = \sqrt{\frac{x-2}{x^2-3x-1}} \rightarrow y = \sqrt{\frac{x-2}{(x-4)(x+1)}} \quad Dg: (-2, +\infty)$$

$$ب) f(m) = \frac{2m^2+1}{4-2[-m]} \rightarrow 4-2[-m] \rightarrow 4+2m \rightarrow 2m = -4 \rightarrow m = -2$$

$$الف) f(m) = \frac{\sqrt{x(x-1)}}{\sqrt{|x|+x}} \rightarrow \frac{x(x+1)(x-1)}{\sqrt{x(x+1)}} \rightarrow \sqrt{x(x+1)} \rightarrow [1, +\infty) \cup [1, +\infty)$$

$$ب) f(m) = \frac{\sqrt{|x-1|-x^2}}{|x|-1} \rightarrow -x^2 + |x-1| \geq 0 \rightarrow |x-1| \geq x^2 \rightarrow [1, 2] \cup [-1, 1]$$

$$g = \frac{1}{|11x-11-11x|}$$

$$II \text{ جز اول}$$

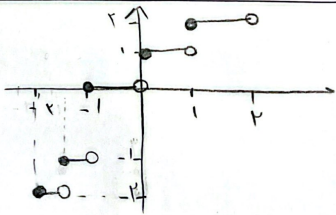
$$\begin{aligned} x = -3 & \Rightarrow |1 - (-3)| = 4 \\ x = -1 & \Rightarrow |1 - (-1)| = 2 \\ x = 1 & \Rightarrow |1 - 1| = 0 \end{aligned}$$

$$||x-1|-1| = R$$

$$\begin{aligned} I \cap x \geq -2 & \rightarrow |x-1-1| = |x-2| \\ II \cap x < -2 & \rightarrow |1-x-1| = |-x| \end{aligned} \quad R = 2$$

$$y = 2m - [n]$$

$$\begin{aligned} n = -2 & \Rightarrow -2 + 2 = 0 \\ n = -1 & \Rightarrow -1 + 2 = 1 \\ n = 0 & \Rightarrow 0 + 2 = 2 \end{aligned}$$



$$f(x) = \frac{x^2 - 6x + 5}{x + 1} + b \quad \sim \quad \frac{(x-5)(x-1)}{x+1} + b$$

$$a = b = ?$$

$$\begin{aligned} \swarrow a = -5 &\Rightarrow (x-1) + b \Rightarrow b = -x \\ \swarrow a = -1 &\Rightarrow (x-5) + b \Rightarrow b = -x \\ \left. \begin{aligned} x = 5 &\Rightarrow -5 - 5 = -10 \\ x = 1 &\Rightarrow -1 - 1 = -2 \end{aligned} \right\} \end{aligned}$$

$$f(x) = \begin{cases} \frac{x^2 + 4x^2 - x - 2}{x^2 - 1} \rightarrow x \neq \pm 1 \\ \frac{ax + 2}{x + b} \rightarrow x = \pm 1 \end{cases}$$

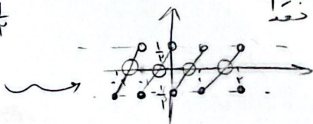
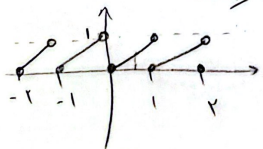
$$f(x) = \sqrt{x - x^2} + x \rightarrow \sqrt{x - 4} + x = 1\sqrt{4}$$

$$g(x) = \sqrt{4x + 4} \rightarrow 4x + 4 \geq 0 \Rightarrow 4x \geq -4 \Rightarrow x \geq -1$$

$$D_{f \vee g} = [-1, 4]$$

$$f - g(4) = 4\sqrt{4} \rightarrow f - 4\sqrt{4} = 4\sqrt{4} \Rightarrow f = 12\sqrt{4}$$

$$g = (-1)^k (x - \lfloor x \rfloor) - \frac{1}{x} = 0$$



$$f = g \quad \text{at } x = 4$$