

$$f(x) = x^2 + 2x + 1 + 9x^2 - 4x + 1 + m x^2 + n x + m n = 10x^2 + 2x + 2 + m x^2 + n x + m n$$

$$x > m, x = 1 \Rightarrow m = 1$$

$$g(x) = \left\{ (x, m), (x, p+1), (p+2, -1), (-9, p+k) \right\}$$

$$p+1 = -1$$

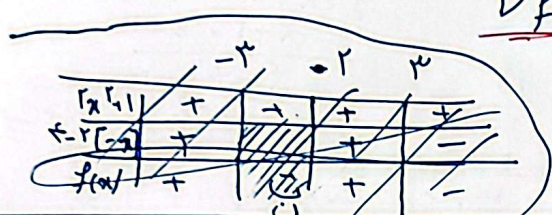
$$p = -2$$

$$-11 + k = -1 \Rightarrow k = 10 \Rightarrow m + n + p + k = -1 + 2 - 11 + 10 = 0$$

$$x^2 - 2x^2 - 1 = -x^2 - 1$$

$$x^2 - 2x^2 - 1 = -x^2 - 1$$

$$D_f = (-2, 2) \cup (2, +\infty)$$



$$x - 2[-x] \neq 0$$

$$2 \neq [-x] \Rightarrow -x \notin [2, 3] \Rightarrow D_f = (-\infty, 2) \cup (3, +\infty)$$

$$-1, 0, 1 \Rightarrow x \neq 0$$

$$\Rightarrow D_f = [1, +\infty)$$

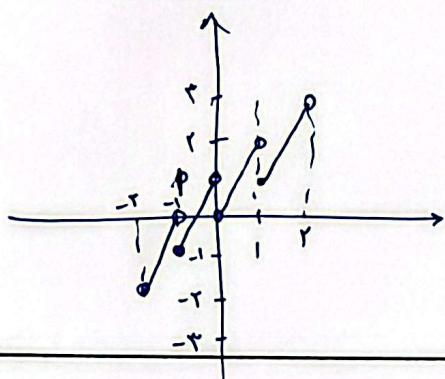
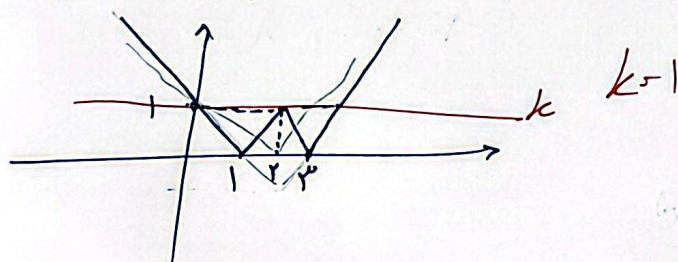
$$x(x^2 - 1) > 0$$

$$① x \neq \pm 1$$

$$|x| - 1 \neq 0, |x - 2| - x^2 \geq 0$$

$$② \begin{cases} x > 2 \Rightarrow -x^2 + x - 2 \geq 0 \Rightarrow x^2 - x + 2 \leq 0 \Rightarrow \text{مقدار مثبت} \times \\ x \leq 2 \Rightarrow -x^2 + x + 2 \geq 0 \Rightarrow x^2 - x - 2 \leq 0 \Rightarrow (x+2)(x-1) \leq 0 \Rightarrow -2 \leq x \leq 1 \end{cases}$$

$$||x - 2| - 1| = k$$



$$-2 \leq x < -1 \Rightarrow [x] = -2$$

$$-1 \leq x < 0 \Rightarrow [x] = -1$$

$$0 \leq x < 1 \Rightarrow [x] = 0$$

$$1 \leq x < 2 \Rightarrow [x] = 1$$

