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$$m^2 + 1 + pm + 9n^2 + 1 - 4m + mm^2 + nm + mn = 0$$

$$m^2(1+9+m) + n(1+n-4) + 1+1+mn = 0$$

$m \leq 10$ $n \leq 6$

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

$p = -11$ $p+k = -1$

$m+n+p+k = ?$

$\downarrow$

$-1 + (-1) + (-11) + k$

$\rightarrow -13 + k$

$p+k = -1$

$-11+k = -1 \rightarrow k = 10$

$f(x) = \frac{x^2+1}{x^2-2x}$ $\rightarrow$ تعریف شده است

$x^2-2x \neq 0 \rightarrow x(x-2) \neq 0$

$\rightarrow x \neq 0, x \neq 2$

$\rightarrow x \in \mathbb{R} - \{0, 2\}$

$y = \sqrt{\frac{x-2}{x^2-2x^2-1}}$

$\frac{x-2}{x^2-2x^2-1} \geq 0$

$\rightarrow x-2 \geq 0 \rightarrow x \geq 2$

$\rightarrow x-2 \leq 0 \rightarrow x \leq 2$

$\rightarrow x = 2$

$\rightarrow x \in \{2\}$

$f(x) = \frac{\sqrt{|x-2|-x^2}}{|x|-1}$

$|x|-1 \neq 0 \rightarrow |x| \neq 1 \rightarrow x \neq \pm 1$

$|x-2|-x^2 \geq 0 \rightarrow |x+2| \geq x^2$

$\rightarrow x-2 \geq x^2 \rightarrow x^2-x+2 \leq 0$

$\rightarrow -x+2 \leq x^2 \rightarrow 0 \leq x^2+x-2 \rightarrow (x+2)(x-1) \geq 0$

$\rightarrow x \in (-\infty, -2] \cup [1, \infty)$

$f(x) = \frac{\sqrt{x(x^2-1)}}{\sqrt{|x|+x}}$

$x(x^2-1) \geq 0$

$\rightarrow x \in [-1, 0] \cup [1, \infty)$

$|x|+x > 0 \rightarrow x > 0$

$\rightarrow x \in (0, \infty)$

$|x-2|-1 = k$

$|x-2|-1 = k \rightarrow |x-2| = k+1$

$x-2 \leq k+1 \rightarrow x \leq k+3$

$x-2 \geq k+1 \rightarrow x \geq k+3$

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

$x-2 \leq 1-k \rightarrow x \leq 3-k$

$x-2 \geq 1-k \rightarrow x \geq 1-k$

$\rightarrow x \in [1-k, 3-k]$

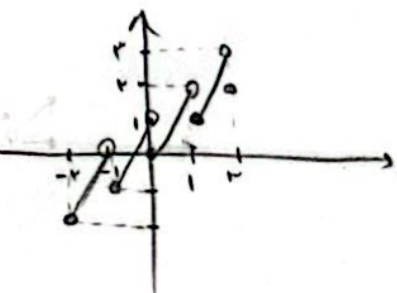
$-2 \leq x < -1 \rightarrow [x] = -2 \rightarrow y \leq 2m+1$

$-1 \leq x < 0 \rightarrow [x] = -1 \rightarrow y \leq 2m+1$

$0 \leq x < 1 \rightarrow [x] = 0 \rightarrow y \leq 2m$

$1 \leq x < 2 \rightarrow [x] = 1 \rightarrow y \leq 2m-1$

$y \leq 4(2) - [2] = 8$



$$a-b \rightarrow -3 - (1) = \underline{\underline{-4}} \quad \text{عوا}$$