

$$a(a+b) \rightarrow a^2 + ab \quad a^2 + ab + b^2 + ba \rightarrow a^2 + (b+b)a + b^2$$

$$a+b=0$$

$$ab=-1$$

$$a+b \rightarrow a^2 + (b+b)a + b^2$$

$$b+b=a$$

$$b=a+b$$

$$a=-1, b=1$$

$$a=-1, b=1$$

$$-1 = a-b \rightarrow a-b = -1$$

$$f(x) = 0 \quad f(a) = 1 \rightarrow g(a) = a^2 - 1 = 0 \rightarrow a^2 = 1 \rightarrow a = \pm 1$$

$$g(a) = a^2 - 1 \rightarrow g(1) = 1^2 - 1 = 0 \rightarrow a^2 = 1 \rightarrow a = \pm 1$$

$$a-b=1$$

$$-1b = 1 \rightarrow b = -1$$

$$a+b=0$$

$$b = -a$$

$$a-b=1$$

$$-1b = 1 \rightarrow b = -1$$

$$a \geq \frac{m}{n} \quad 2 \text{ nbs } (g(a)) : a \leq \frac{b}{n}$$

$$a \cap b = \left[\frac{m}{n}, +\infty \right) \cap \left(-\infty, \frac{b}{n} \right] = a \cap b = 1$$

$$a = b - 1$$

$$a^2 - b = k \Rightarrow a^2 = b + k \Rightarrow a = \sqrt{b+k} \quad k = k$$

$$a^2 - b = k \Rightarrow a^2 = b + k \Rightarrow a = \sqrt{b+k} \quad k = k$$

$$f(a) = \sqrt{m}a + k \rightarrow a \leq m$$

$$f \times g = a \cap b = (-\infty, m] \cap [-1, +\infty) = [-1, m]$$

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$$a \cap b = 1$$

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$$P(x) = x^4 + 2x^3 + 1 + 9x^2 - 4x + 1 + mx^2 + nx + m^2$$

$$(1+m)x^4 + (n+9)x^3 + mx^2 + nx + m^2 + 1 = 0 \quad 1+m=0 \rightarrow m=-1$$

$$n+9=0 \rightarrow n=-9$$

$$(4-1-0)(9+9) \rightarrow p+1=10 \rightarrow p=-11 \rightarrow (-9, -11) \text{ و } (-4, -11)$$

$$m+n+p+k = -1-9-11+10 = -11 \rightarrow k=10$$

الف)

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

$$x^2-2x-1=0 \rightarrow x=1 \pm \sqrt{2}$$

$$x^2 = -2x \rightarrow x^2 = 0 \rightarrow x=0$$

$$x=2$$

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

الف)

$$\frac{x^2(x^2-1)}{x^2-2x} \geq 0 \rightarrow \frac{x^2(x-1)(x+1)}{x(x-2)} \geq 0$$

$$\begin{cases} |x|+x > 0 \\ |x| > 2 \end{cases} \quad \text{و} \quad \begin{cases} |x|+x < 0 \\ |x| < 2 \end{cases}$$

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

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

$$|x-2| \neq 0 \rightarrow |x| \neq 1 \rightarrow x \neq 1$$



بارسم شکل راحت تر جواب می ده!

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

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

$$|x-2| - 1 = k \rightarrow x-2 = k+1 \rightarrow x = k+3$$

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

$$y = 2x - [x]$$

$$x \in [-2, -1) \rightarrow y = -2$$

$$x \in [-1, 0) \rightarrow y = -1$$

$$x \in [0, 1) \rightarrow y = 0$$

$$x \in [1, 2) \rightarrow y = 1$$

$$x \in [2, 3) \rightarrow y = 2$$

مرتب بنویس!

