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$$\frac{2x^2 + 2x^2 - 1x + 2}{2x^2 + 2x^2} \cdot \frac{x+1}{x+1}$$

$$\frac{2x^2 - 1x + 2}{2x^2 + 2x^2}$$

$$\frac{2x^2 - 1x + 2}{4x^2}$$

$$\frac{2x^2 - 1x + 2}{4x^2} = \frac{2x^2}{4x^2} - \frac{1x}{4x^2} + \frac{2}{4x^2}$$

$$= \frac{1}{2} - \frac{1}{4x} + \frac{1}{2x^2}$$

$$\frac{2x^2 + 2x^2 + 1x + 2}{2x^2 + 2x^2} \cdot \frac{x+1}{x+1}$$

$$\frac{2x^2 + 2x^2 + 1x + 2}{4x^2}$$

$$\frac{4x^2 + 1x + 2}{4x^2}$$

$$\frac{4x^2}{4x^2} + \frac{1x}{4x^2} + \frac{2}{4x^2}$$

$$= 1 + \frac{1}{4x} + \frac{1}{2x^2}$$

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$$\frac{x^2 - 2x^2 + 2x - 1}{-x^2 + x^2} \cdot \frac{x-1}{x-1}$$

$$\frac{-x^2 + 2x - 1}{-x^2 + x^2}$$

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

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

$$x > 1$$

$$R = [-2, 1]$$

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$$x^2 - 2x + 2x - 2x + 2x \neq 0$$

$$x^2 - 2x + 2x - 2x + 2x \neq 0$$

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

$$x = 2$$

$$x^2 + 2x \neq 0$$

$$x(x+2) \neq 0$$

$$x \neq 0, -2$$

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$$|2x+1| \neq |x+2|$$

$$2x^2 + 2x + 1 - x^2 - 4x - 4 \neq 0$$

$$x^2 - 2x - 3 \neq 0$$

$$(x-3)(x+1) \neq 0$$

$$x \neq 3, -1$$

$$|2x+1| \geq |x+2|$$

$$2x^2 + 2x + 1 \geq x^2 + 4x + 4$$

$$x^2 - 2x - 3 \geq 0$$

$$(x-3)(x+1) \geq 0$$

$$x \leq -1 \text{ or } x \geq 3$$

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$$1 > 10^{\frac{1}{x}} > 0$$

$$R = (-\infty, 3)$$

$$(0, 3)$$

$$1 - 10^{\frac{1}{x}} > 0$$

$$1 > 10^{\frac{1}{x}} > 0$$

$$R = (\frac{1}{10}, +\infty)$$

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$\log_a b \rightarrow \begin{cases} a > 0 \\ b > 0 \\ b \neq 1 \end{cases}$

$$\log_{10} |x-1| > 0$$

$$x-1 > 0 \rightarrow x > 1 \quad (2)$$

$$|x-1| > 1$$

$$x > 2 \quad (1)$$

$$\log_{10} |x-1| \leq 1 \rightarrow x \leq 2 \quad (3)$$

$$R = (1, 2)$$

$$\rightarrow D = (1, 2]$$

5, 5

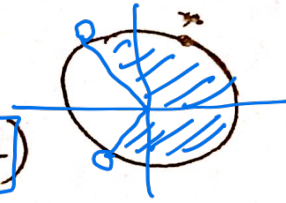
6

$$\frac{x-1}{x+1} > 0 \quad (1) \quad \frac{-1}{+1} \quad \checkmark$$

$$R = (-1, 1)$$

$$2(\cos x + 1) > 0$$

$$\cos x > -\frac{1}{2} \quad \checkmark$$



$$R = \left[2k\pi - \frac{2\pi}{3}, 2k\pi + \frac{2\pi}{3} \right]$$

$$\log_{10} \frac{x-1}{x+1} > 0 \rightarrow x < -1 \quad (2)$$

$$\rightarrow D = (-\infty, -1)$$

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7

$$z(x-1)^5$$

$$z(x^5 - 4x + 9) = ax^5 + bx$$

$$z = a + b$$

$$(a+b)(x^5 - 4x + 9)$$

$$b = 9a + 11$$

$$a = -9a - 12 \quad \vee a = -12$$

پاسخی نه!

5

8

$$x^2 + 2x + 1 - m^2 \geq 0$$

$$f = f(1)(1-m^2) \leq 0$$

$$1 - 1 + 1 - m^2 \leq 0$$

$$m^2 \leq 1$$

$$-1 \leq m \leq 1$$

(5)

(2)

9

$$\sqrt{f(x)}$$

$$(x-1)(x+1) \geq x \geq -2$$

$$[x] + [-x] = 1$$

$$\hookrightarrow x \in \mathbb{Z}$$

$$R = \{-2, -1, 0, 1, 2\}$$

(5)

(2)

10