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سبب الذي خلق العبد

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$$f(x) = (1)^{2-x} - 1$$

$$y = \sqrt{x^2 f(x+1)}$$

$$0 = 2^{2-(x+1)} - 1 \Rightarrow 2^0 = 2^{1-x} - 1$$

$$1 - x = 0 \Rightarrow x = 1$$

$$Df = [0, 1]$$

$$f(x) = \sqrt{x + |x + 2|}$$

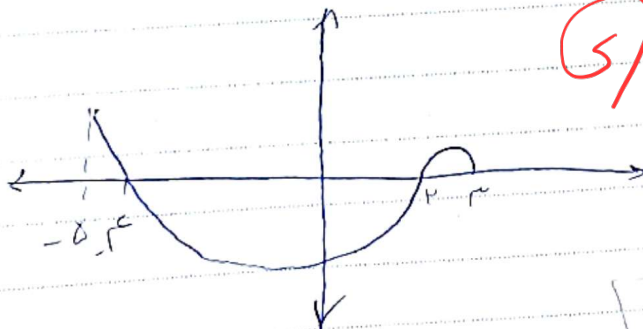
$$f(-x) = \sqrt{-x + |2 - x|}$$

$$-x + 2 - x = 2 - 2x > 0$$

$$2x < 2 \Rightarrow x < 1$$

$$-x + x - 2 > 0 \quad \times$$

$$Df = (-\infty, 1]$$



x	-1	0	1	2	3
$f(x)$	$+$	$+$	$+$	$+$	$+$
$f'(x)$	$-$	$-$	$+$	$+$	$+$
y	1	-1	0	1	1

$$Df = (-1, 1] \cup (2, 3)$$

$$y_1 = \frac{1}{9x^2 - 11x^2 - 5x - 3}$$

$$y_2 = \frac{1}{x^2 + ax + b}$$

$$x^2 + ax + b = 0$$

$$|a| < \sqrt{4ac}$$

$$x^2 - x - 1 = x^2 + ax + b \rightarrow a = -1, b = -1$$

$$C = r$$

$$r^2 d + r^2 a = 0$$

$$a = -d$$

$$r^2 e - a^2 + r^2 b = -V$$

$$a e - a b = -r^2$$

$$a(e-b) = -r^2$$

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$$(rx^r + ax + b)(cx^r + dx + e) = 9x^r - vx^r - rx - r$$

$$rcx^{2r} + (rd+ac)x^{r+1} + (re+ad+bc)x^r + (ae+bd)x + be$$

$$be = -r$$

$$y = \sqrt{f(x)} - f\left(\frac{x}{2}\right) \rightarrow (x \neq 0) \quad f(x) = x^r + x$$

$$x^r + x > \left(\frac{x}{2}\right)^r + \frac{x}{2} \Rightarrow x^r + x > \frac{x^r}{2} + \frac{x}{2}$$

$$x^r + x > \frac{x^r + x}{2} \Rightarrow x^r + x = \frac{x^r + x}{2}$$

$$x^r + x = r + r^2 x^r \Rightarrow x = r$$

$$-4r - r - 1 - 1 \Rightarrow -5r - 2 < 0$$

$$1 + 1 - 4r - r < 0$$

$$Df = [-r, 0) \cup (r, +\infty)$$

$$f(x^r + x) = rx^r - 1$$

$$\left. \begin{array}{l} x=r \rightarrow f(10) = V \\ x=1 \rightarrow f(r) = 1 \end{array} \right\} f(x) \neq f(10) \quad (1)$$

Arman

(10) دامنه مستقیم f و g : 1 و 3 و -1

الف) $f(2x) : \left(\left(\frac{1}{2}, 2 \right) \left(\frac{3}{2}, -1 \right) (2, 2) \left(-\frac{1}{2}, 6 \right) \right)$

$$2x = 1 \Rightarrow x = \frac{1}{2}$$

$$2x = 3 \Rightarrow x = \frac{3}{2}$$

$$2x = -1 \Rightarrow x = -\frac{1}{2}$$

$$2x = 6 \Rightarrow x = 3$$

ب) $f(x^2) : \left((1, 2) (-1, 2) (-\sqrt{2}, -1) (\sqrt{2}, -1) (2, 2) (-2, 2) \right)$

$$x^2 = 1 \Rightarrow x = \pm 1$$

$$x^2 = 2 \Rightarrow x = \pm \sqrt{2}$$

$$x^2 = -1 \Rightarrow x = \pm i$$

$$x^2 = 6 \Rightarrow x = \pm \sqrt{6}$$

ج) $2g^2(x) + 1 : (-2, 19) (1, 3) (3, 9) (-1, 1)$

د) $\frac{y}{g} = \left((1, -4) (3, -\frac{1}{2}) \right)$

$$\hookrightarrow g \neq 0 \Rightarrow x \neq -1$$

© (4, 1, 2)

shman

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