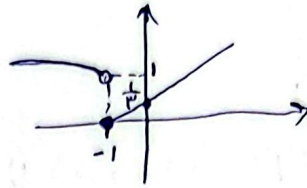


$$x = y^3 - 1 \Rightarrow y = \sqrt[3]{x+1} \quad x > -1$$

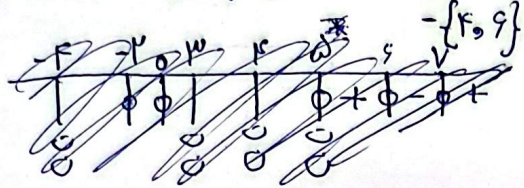
$$x = -y^2 \Rightarrow y = \sqrt{-x} \quad x < 0$$



تابع است. ✓✓

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$$D = (-4, -2] \cup \{-2\} \cup [0, 3) \cup [7, +\infty)$$



	-4	-2	0	3	4	5	6	7
x	-	-	-	+	+	+	+	+
f(x)	-	+	+	+	-	+	+	+
f(x-2)	-	-	+	+	+	+	-	+
g(x)	-	+	+	+	-	-	-	+

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$$x^3 - 4x = 0 \Rightarrow (x-4)(x+4)(x) = 0 \quad D = \mathbb{R} - \{-4, 0, 4\}$$

رفت!

(الف)

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$$4x^2 - 3x + 2 = 0 \quad \Delta = 9 - 16 = -7 < 0$$

برون جواب
هواست مثبت

(ب)

$$4x^2 - 3x = 0 \quad \begin{array}{c} -4 \quad 0 \quad 4 \\ - \quad + \quad - \quad + \end{array}$$

$$D = (-4, 0) \cup (4, +\infty)$$

$$x-2=0 \quad x=2$$

$$x^2 - 4x^2 - 1 = 0 \xrightarrow{x=t} t^2 - 4t - 1 = 0 \quad (t-4)(t+4) = 0 \Rightarrow t=4 \rightarrow x=4$$

$$\begin{array}{c} -2 \quad 4 \\ - \quad + \quad + \end{array}$$

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

(الف)

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مخرج بنایه صفر نشود!

$$D_f = \mathbb{R} - (-3, -2)$$

$$D = [-3, 4]$$

(ب)

$$4 - 2[-x] \neq 0 \Rightarrow 2[-x] = 4 \Rightarrow [-x] = 2 \Rightarrow -2 < -x < 3 \Rightarrow -3 < x < 2$$

$$x(x^2-1) \geq 0 \Rightarrow x = \pm 1, 0$$

$$\begin{array}{c} -1 \quad 0 \quad 1 \\ - \quad + \quad - \quad + \end{array}$$

$$D = [-1, 0] \cup [1, +\infty)$$

$$|x| + x > 0 \Rightarrow |x| > -x$$



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

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

$$\begin{array}{l} x > 2 \quad x^2 - x + 2 \leq 0 \quad \times \\ x < 2 \quad x^2 + x - 2 \leq 0 \quad -1 \leq x \leq 1 \end{array}$$

(ب)

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

$$D = [-2, 1) \cup (-1, 1]$$

$$\begin{array}{c|c|c} p^* & p & \\ \hline + & 0 & + \\ \hline & 0 & + \\ \hline & & + \end{array}$$

$$D = [\cancel{1}, \cancel{0}, \cancel{+\infty})$$

(الف)

یاد قدرت و برآینش همواره هم علاقه پس دامنه تابع IR میباشد!

$$\begin{array}{c|c|c|c} 1 & p & f & \\ \hline - & 0 & 0 & + \\ \hline & - & 0 & + \\ \hline & & & + \end{array}$$

$$D = [3, +\infty) \cup \{1\} \checkmark$$

$$|1m-1|-1-k=0$$

$$|k| > 0$$

$$|1m-1|-1-k=0$$

$$|1m-1|-1-k=0$$

$$|1m-1|-1-k=0$$

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$$|1m-1|-1-k=0$$

$$|1m-1|-1-k=0$$

$$|1m-1|-1-k=0$$

$$n-1=0 \rightarrow n=1$$

$$\frac{n+1}{n-1}=0 \rightarrow n=-1$$

$$n=3$$

$$n^2-9n+9=(n-3)^2$$

$$\text{کدام است؟} \checkmark$$

$$n^2+3n+2=0 \rightarrow n=-1, -2$$

$$\log \frac{1}{n} > 0$$

$$\log \frac{n}{1} < 0 \Rightarrow 0 < n < 1$$

$$n+1 > 0 \Rightarrow n > -1$$

$$D = (\cancel{1}, \cancel{1}) \cup \{0\}$$

$$n+1 \neq 1 \Rightarrow n \neq 0$$

$$-2 \leq 3n^2-1 \leq 3 \quad -2 \leq 3n^2 \leq 4 \quad 0 \leq n^2 \leq \frac{4}{3}$$

$$n^2 \leq \frac{4}{3} \quad n \leq \frac{2}{\sqrt{3}} \quad n \geq -\frac{2}{\sqrt{3}}$$

$$D = [-\frac{2}{\sqrt{3}}, \frac{2}{\sqrt{3}}] \checkmark$$

$$1) \quad u+1 > 0 \rightarrow u > -1, \quad u+1 \neq 1 \rightarrow u \neq 0 \quad -9$$

$$2) \quad u > 0, \quad u \neq 1$$

$$\xrightarrow{\wedge} D_f = (0, 1)$$

$$3) \quad \lg \frac{1}{u} > 0 \rightarrow 0 < u < 1$$