

تلف - 1

باف

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تابع است.

$$y_1^2 = y_2^2 \rightarrow y_1 = y_2$$

الف - 1

$$x = \frac{x}{y} \rightarrow \frac{x}{y} \cos y = 0 \rightarrow y = \left\{ \frac{x}{y}, \frac{3x}{y} \right\}$$

تابع نیست

ب -

$$x^2 + y^2 + 2xy = 5xy \Rightarrow x^2 + y^2 - 3xy = 0 \rightarrow (x-y)^2 = 0 \rightarrow x = y$$

تابع است

ج -

$$xy^2 + 2x - y^2 - 2y = 0 \rightarrow (x-y)(y+2) = 0 \rightarrow x = y$$

مشتق می شود

تابع است.

د -

$$|x-1| \geq 2 \rightarrow x \geq 3$$

$$\searrow x \leq -1$$

$$f(-1) = 2 - b + a - 2 \rightarrow a = b + 2$$

پ -

$$-x^2 - bx + a \geq 0 \rightarrow x^2 + bx - a \leq 0 \quad S = \left[-\frac{b}{a}, \frac{c}{a} \right] \quad \begin{cases} a = 1, b = -1 \end{cases}$$

م -

$$D_f = [-1, 2] \quad x-1=1$$

$$x=4 \rightarrow 8a + 4b + c = 0 \quad 4b = -c \quad \frac{4}{4} \frac{b}{b} = \frac{-c}{-c} \rightarrow a = 0$$

ر -

$$f(0) = (-1)b = -\frac{1}{1}|b| \quad |b| = b$$

$$x=0 \rightarrow \sqrt{c} \quad c < 0, b < 0 \quad \textcircled{1}$$

5, 100 / 100

$$|x| - [x] \neq 0 \rightarrow Df. R. w$$

$$xy_0, y_1, 0 \rightarrow \sqrt{y} = 9 - \sqrt{x}$$

$$9 - \sqrt{x} \geq 0 \rightarrow 9 \geq \sqrt{x} \rightarrow 81 \geq x$$

$$Df: [0, 81]$$

$$xy_0, 3x-1 \geq 0, x \neq 1$$

$$x \geq \frac{1}{3}$$

$$y = \frac{3x-1}{x} \geq 0 \rightarrow 3x-1 \geq 0$$

$$Df: \left(\frac{1}{3}, \frac{1}{2}\right]$$

$$f(x) = \frac{1}{x + \sqrt{|x| - |x|}} \rightarrow \frac{1}{x + \sqrt{|x| - |x|}} \geq 0 \rightarrow (\sqrt{|x|} - 1)(\sqrt{|x|} + 1) \geq 0$$

$$\begin{array}{c|c|c} -9 & 9 & \\ \hline + & - & + \end{array}$$

$$Df = (-9, 9) \rightarrow \sqrt{|x|} = 1$$

$$\frac{3x+1}{x+b} \geq 0 \rightarrow x+b \neq 0 \rightarrow x \neq -b \quad x \neq -b \Rightarrow b \neq -1$$

$$y = \sqrt{f(x) - x + 1} \quad f(x) = \begin{cases} 2x-1 & [x] \geq 1 \\ x+1 & [x] \leq 1 \end{cases}$$

$$x \geq \omega \Rightarrow y = \sqrt{2x-1-x+1} = \sqrt{x} \rightarrow x \geq 0$$

$$x < \omega \Rightarrow x \geq -\frac{1}{2}$$

$$\frac{x(2x+1)^{\frac{1}{r}}}{(2x+1)^{\frac{1}{r}}} \Rightarrow \frac{x}{2x+1} \Rightarrow 2x+1 \neq 0 \quad Df = R - \left\{-\frac{1}{2}\right\}$$

$$\sigma, \omega \in \mathbb{R}^n$$

$$r_{\alpha} - \alpha < 0 \rightarrow \alpha > \frac{q}{r}$$

$$1 - \epsilon_y (r_{\alpha} - \alpha) < 0$$

$$\rightarrow \epsilon_y \frac{r_{\alpha} - \alpha}{1} \leq 1 \rightarrow r_{\alpha} - \alpha \leq 1$$

$$Dy = \left(\frac{q}{r}, \omega + \frac{q}{r} \right) \Rightarrow (b, c) \Rightarrow b = \frac{q}{r} \Rightarrow c = \omega + \frac{q}{r}$$

$$\Rightarrow c - b = \omega + \frac{q}{r} - \frac{q}{r} = \omega$$