

هم بنجینه C

قلب V

رچانه جی ۱۰۰، ۲۰۰

$$\frac{-x}{f(x)} \geq 0$$

$$f(x) \neq 0$$

؟ اصل

$$D_f = [-2, 0] \cup [2, 2]$$

(۲)

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(۱)

؟ اصل

☆ $f(x) - 2c = x^2 - 2x + 2$

$$f(x) - 2c = x^2 - 2x + 2$$

$$f(x) = c \quad (۳)$$

$$f(-2) = (-2)^2 - 2(-2) + 2$$

$$f(-2) = 4 - (-4) + 2$$

$$f(-2) = 4 + 4 + 2$$

$$f(-2) = 10$$

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$$f(x) - 2c = (x)^2 - 2(x) + 2$$

$$c - 2c = 4 - 4 + 2$$

$$-c = 2 \rightarrow c = -2 \Rightarrow f(x) = -2 \quad \star$$

(۵)

$$f(2) = 2 - 2 = 0$$

$$f(1) = 2(1) + 2 \rightarrow 4$$

(۶)

$$f(x) = 2(x) + 2 \rightarrow 4$$

$$f(f(2)) + f(f(1)) = 4 + 2 = 6$$

$$f(x-1) = a(x-1)^2 - b(x-1) + 2$$

$$f(x-1) = a(x^2 - 2x + 1) - b(x-1) + 2$$

$$f(x-1) = ax^2 - 2ax + a - bx + b + 2$$

$$f(x-1) - f(x) = (ax^2 - 2ax + a - bx + b + 2) - (ax^2 - bx + 2)$$

$$f(x-1) - f(x) = -2ax + a + b = 4x + 2$$

$$-2a = 4$$

$$a = \frac{4}{-2} = -2$$

$$a + b = 2$$

$$-2 + b = 2 \rightarrow b = 4$$

$$a - b = -2 - 4 = -6$$

(۷)

$$x = \sqrt{2} - 2$$

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

$$x^2 = 2 - 4\sqrt{2} + 4$$

$$x^2 = (2 - 4\sqrt{2} + 4) \rightarrow x^2 = 6 - 4\sqrt{2}$$

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

$$f(x) = 2\sqrt{2} - 4$$

$$x^2 + 2 = (6 - 4\sqrt{2}) + (2\sqrt{2} - 4)$$

$$x^2 + 2 = 6 - 4\sqrt{2} + 2\sqrt{2} - 4$$

$$x^2 + 2 = 2 - 2\sqrt{2} = -2\sqrt{2}$$

$$f(\sqrt{2} - 2) = \frac{-1 + 2}{-1 + 2}$$

$$f(\sqrt{2} - 2) = \frac{1}{1} = 1$$

(۸)

$$\frac{x^r+1}{x^r} = \frac{x^r}{x^r} + \frac{1}{x^r} = x^r + \frac{1}{x^r}$$

$$f(-r) = 11$$

$$x - \frac{1}{x} = -r$$

$$\uparrow$$

$$y = -r$$

$$x(x - \frac{1}{x}) = x(-r)$$

$$x^2 - 1 = -rx$$

$$x^2 + rx - 1 = 0$$

$$f(r) = 0 \quad f(1) = -r \quad f(0) = r \quad f(r) = 1$$

$$\frac{f(x)}{g(x)} = \frac{f(r)}{g(r)} = 0 \quad \frac{f(1)}{g(1)} = -\sqrt{r} \quad \frac{f(0)}{g(0)} = \frac{r}{r}$$

$$\left\{ \frac{r}{r}, (0, -\sqrt{r}), (1, 0), (r, 0) \right\}$$

$$\frac{g(x)}{f(x)} = \frac{g(1)}{f(1)} = -\frac{\sqrt{r}}{r} \quad \frac{g(0)}{f(0)} = \frac{r}{r}$$

$$\left\{ \frac{r}{r}, (0, \frac{r}{r}), (1, -\frac{\sqrt{r}}{r}), (r, 0) \right\}$$

حرکت از توابع باید به صورت مرسوم های
از زوج های مرتب نوشت شود

$$2f(x) = \{(r, r), (r, r), (-r, r), (1, -r)\}$$

(9) الف

$$f(x) + 1 = \{(r, r), (r, r), (-r, r), (1, -1)\}$$

(ب)

$$3f(x) + 1 = \{(r, r), (r, r), (-r, r), (1, r)\}$$

(ج) د

$$f(2x) = \{(1, 1), (1, r), (-r, r), (0, -r)\}$$

(د)

$$f - g = \{(1, r), (r, r), (r, r)\}$$

(10) د

$$\frac{f}{g} = \{(r, 0), (r, -r)\}$$