

$$f(x) = (x-1)\sqrt{1-x} \quad 1-x \geq 0$$

$$x = -1 \rightarrow 1^2$$

$$D_f = x \leq 1$$

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$$g(x) = \sqrt{(1-x)^3}$$

$$-\sqrt{1^3} = -1\sqrt{1}$$

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

$$x \leq 1$$

$$1-x \leq 0$$

$$x-1 = -(1-x)$$

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

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

$$D_f = [0, +\infty)$$

$$x \geq 0 \rightarrow x = \sqrt{x^2}$$

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

$$g(x) = \sqrt{x^3}$$

$$D_g = [0, +\infty)$$

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$$f(x) = [\sqrt{x} - \lfloor \sqrt{x} \rfloor] \quad x \geq 0 \quad D_f = [0, +\infty)$$

$$g(x) = \sqrt{x - |x|}$$

$$0 \leq \sqrt{x} - \lfloor \sqrt{x} \rfloor < 1 \quad R_f = \{ \}$$

$$x - |x| \geq 0 \quad x \geq |x| \quad D_g = [0, +\infty)$$

$$g(x) = 0 \quad \leftarrow |x| = x$$

$$R_g = \{0\}$$

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$$g = \{(-1, 1), (1, 1), (2, 3), (3, 5), (4, 7), (5, 9)\} = \{(1, 2), (2, 3), (3, 4), (4, 5), (5, 6)\}$$

$$\left(\frac{f+g}{f-g}\right)(1) = \frac{2+1}{2-1} = 3 \quad \left(\frac{f+g}{f-g}\right)(2) = \frac{3+2}{3-2} = 5 \quad \left(\frac{f+g}{f-g}\right)(3) = \frac{4+3}{4-3} = 7 \quad \left(\frac{f+g}{f-g}\right)(4) = \frac{5+4}{5-4} = 9$$

$$f(0)g(-1) = (0)(1) = 0$$

$$w_x = 1 \quad x=1$$

$$w_x - 1 = 2$$

$$f(x) = \{(2, 1), (-1, 4), (0, 5), (2, 2), (2, -1)\}$$

$$g(x) = f(w_x - 1)$$

$$g(x) = \{(1, 1), (0, 4), (\frac{1}{w}, 5), (-\frac{1}{w}, 2), (\frac{2}{w}, -1)\}$$

$$w_x - 1 = -1 \quad w_x = 0$$

$$w_x = 0 \quad x = 0$$

$$w_x = 1 \quad x = \frac{1}{2}$$

$$w_x = \frac{1}{2} \quad x = \frac{1}{2}$$

$$w_x = -1 \quad x = -\frac{1}{2}$$

$$w_x = -\frac{1}{2} \quad x = -\frac{1}{2}$$

$$w_x = 2 \quad x = \frac{3}{2}$$

$$w_x = \frac{3}{2} \quad x = \frac{3}{2}$$

$$h(x) = f(|x|) \quad h(x) = \{(2, 1), (1, 4), (0, 5), (2, 2), (3, -1)\}$$

Arman

$$rP(\omega) = f(-r) + a \quad f(x) = \begin{cases} (a+1)(x+r) & x > 1 \\ wa + rx & x \leq 1 \end{cases}$$

$$r(a+1)(v) = wa - r + a$$

$$ra + r = wa - r \quad wa = -1 \quad \boxed{a = -1/r}$$

$$\sqrt{r-\sqrt{w}} + \frac{1}{\sqrt{r-\sqrt{w}}} + r + \sqrt{r+\sqrt{w}} + \frac{1}{\sqrt{r+\sqrt{w}}} + r + f(x) \cdot \sqrt{x} + \frac{1}{\sqrt{x}} + r$$

$$(r+\sqrt{r})(r-\sqrt{r}) = \varepsilon - w = 1 \quad \frac{1}{r+\sqrt{r}} = r - \sqrt{r}$$

$$\sqrt{r-\sqrt{w}} + \sqrt{r+\sqrt{w}} + r + \sqrt{r+\sqrt{w}} + \sqrt{r-\sqrt{w}} = r(\sqrt{r-\sqrt{w}} + \sqrt{r+\sqrt{w}}) + r$$

$$\begin{aligned} r(rf(x) - wf(-x) - rx^2 - x) & \quad rf(x) - wf(-x) = Ax^r - Bx \\ w(rf(-x) - wf(x) - rx^r + x) & \quad rf(-x) - wf(x) = 14x^r + wx \\ -wf(x) & = 10x^r + x \\ -f(x) & = \frac{10x^r + x}{w} \quad f(x) = \frac{rx^r - x}{w} \end{aligned}$$

$$(x+r)f(x) - wx f(n+r) = rx^r - mx + w - 1$$

$$x \rightarrow 0 \quad rf(0) = wm - 1 \rightarrow f(0) = \frac{1w \cdot 0 - 1}{r} = \frac{-1}{r} \quad \boxed{f(0) = -1/r}$$

$$x \rightarrow r \quad rf(0) = 1/r + rm + wm - 1$$

$$\frac{r(r)f(0)}{wm - 1} \cdot rm - r = 1w + 0m$$

$$rm - 1 \quad rm = 1 \quad m = 1/r, w$$

$$f(x) + f\left(\frac{1}{x}\right) = ax + b + \frac{a}{x} + b$$

$$\frac{ax^r + bx + a}{x} = \frac{wx^r - 14x + r}{x} \quad a = w \quad b = -r$$

$$f(-1) = (-1)(w) - r = -w - r$$

Arman