

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

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

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

$$g(x) = |\sqrt{x-2}-2| \quad x \geq 4 \quad \sqrt{x-2}-2 \geq 0 \quad |\sqrt{x-2}-2| = \sqrt{x-2}-2$$

$$\sqrt{x-2}+2 + \sqrt{x-2}-2 = 2\sqrt{x-2} \quad \frac{a+b}{c} = \frac{\frac{a}{c} + \frac{b}{c}}{1} \quad \frac{a+b}{c} = \frac{\frac{2}{-2} + \frac{1}{2}}{1}$$

$$f(x) = \frac{x+2}{x^2-2x+2} \quad g(x) = \left(2, \frac{1}{-2}\right), (0, 2)$$

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

$$x = 1 \Rightarrow \frac{2}{1-2+2} = \frac{2}{1} = 2 \quad x = 0 \Rightarrow \frac{2}{1-0+2} = \frac{2}{3}$$

$$g(x) = \{(2, 3), (1, -1), (2, 2), (-1, 0)\} \quad f(x) = \{(1, 2), (2, -1), (2, 2), (-1, 2)\}$$

$$f(2x) = \left\{\left(\frac{1}{2}, 2\right), \left(\frac{2}{2}, -1\right), (2, 2), \left(-\frac{1}{2}, 2\right)\right\}$$

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

$$2) \quad 2g(x) + 1 = \{(-2, 1), (1, 3), (2, 3), (-1, 1)\}$$

$$3) \quad \frac{xf}{g} = \{(1, -2), (2, -1)\}$$

$$g = \{(\omega, 1), (2, 2), (-2, 2), (1, 2)\} \quad f(x) = \{(2, 1), (2, 1), (2, 1), (2, 1)\}$$

$$h = 2f + g = \{(2, \omega), (2, \omega), (-2, 2)\}$$

$$f(x) = \frac{\sqrt{x^2-2}}{x-2} \quad g(x) = [x] + [-x] \quad \begin{cases} 3x \geq 0 & x \geq 0 \\ \sqrt{x} \geq x^2 & x \geq x \end{cases} \Rightarrow \begin{cases} 3 \geq x \geq 0 \\ \omega \end{cases}$$

$$g(x) + 1 = \frac{1}{x-2} \quad \left(\frac{f}{g+1}\right)(x) \Rightarrow \frac{1}{x-2} \quad \{0, 1, 2\}$$

Arman

$$h(x) = \frac{f(x)}{g(x)}$$

$$f(x) \sqrt{\omega x - x^2} - x$$

$$(x-1)(x-x) \geq 0$$

$$D_f = [1, x]$$

در این رابطه برای $x=1, 2, 3$ در این رابطه قرار دادیم

$$h(1) = \frac{0}{1} = 0$$

$$h(2) = \frac{\sqrt{2}}{2} = \frac{\sqrt{2}}{2}$$

$$h(x) = \left\{ (1, 0), (2, \frac{\sqrt{2}}{2}), (3, 0) \right\}$$

$$h(3) = \frac{0}{3} = 0$$

$$y = x^w - w x^r + w x \quad y = (x-1)^w + 1$$

$$(x-1)^w = y-1 \quad x-1 = \sqrt[w]{y-1}$$

$$x = \sqrt[w]{y-1} + 1 \quad \rightarrow R_f = \mathbb{R}$$

$$\rightarrow y = \frac{1}{x^r - rx}$$

$$y x^r - r y x - 1 = 0 \quad b = -rac$$

$$x = \frac{+ry \pm \sqrt{(ry)^2 - r(r)(-1)}}{r}$$

$$ry^2 + ry \geq 0 \quad ry \rightarrow y+1$$

$$R_f = (-\infty, -1] \cup (0, +\infty)$$

$$ry(y+1) \geq 0$$

$$y = x^r - rx + 10 \quad x = \frac{-b}{ra} = \frac{y}{r} \quad R_f = [4, +\infty)$$

$$\frac{r}{-r} = A + 10 = \frac{y}{r}$$

$$y = -x^r + rx + 9 \quad \frac{y}{-r} = +w \quad R_f = (-\infty, 12]$$

$$\frac{-1}{-1} = A + 9 = 12$$

$$y = \sqrt{x^r - rx - w} \quad \frac{-b}{ra} = \frac{+r}{r} = r \quad E = A - w = -v \quad R_f = \sqrt{[-v, +\infty)}$$

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

$$y = \sqrt{4x - x^r} \quad \frac{-b}{ra} = +w \quad R_f = (-\infty, 9] \quad R_f = [0, 9]$$

Arman

Subject:

Year:

Month:

Day:

$$1) y = x^w \omega x^r + r x + 1 \quad R_f = \mathbb{R}$$

$$2) y = x^v - r x^r + w x + r \quad R_f = \mathbb{R}$$

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$$3) y = [x^v - r x^r + w x + 1]^r \quad R_f = [0, +\infty)$$

$$4) y = (x^w - r x^r + w x + 1)^r \quad R_f = [0, +\infty)$$

$$5) y = \frac{w x + 1}{x - r} \quad R_f = \mathbb{R} \setminus \{w\}$$

$$6) y = \frac{r x + 1}{x + 1} \quad R_f = \mathbb{R} \setminus \{r\}$$

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