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

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

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

$$2\sqrt{x-2} = a + b\sqrt{x+c} \Rightarrow a=0 \quad b=2 \quad c=-2 \Rightarrow \frac{0+2}{-2} = -1$$

$$x^2 - 2x + 3 = 0 \Rightarrow \begin{cases} x=1 \\ x=3 \end{cases}$$

$$\text{Dgnf} = \{2, 0\}$$

$$g(0) = 2 \quad f(0) = \frac{3}{2} \rightarrow 2 \times \frac{3}{2} \Rightarrow 3 \rightarrow (0, 3)$$

$$g(2) = 1 \quad f(2) = -2 \rightarrow 1 \times \frac{1}{-2} \Rightarrow -\frac{1}{2} \rightarrow (2, -\frac{1}{2})$$

$$\left. \begin{matrix} (0, 3) \\ (2, -\frac{1}{2}) \end{matrix} \right\} \Rightarrow \{(0, 3), (2, -\frac{1}{2})\}$$

$$\text{Dgnf} = \{-1, 2, 1\}$$

$$1) \left\{ \left(\frac{1}{2}, 2\right), (1, 5), (-1, 2), \left(-\frac{1}{2}, 2\right) \right\}$$

$$2) \left\{ \left(\frac{1}{4}, 2\right), \left(\frac{3}{4}, -1\right), \left(\frac{5}{4}, 2\right), \left(\frac{7}{4}, -1\right) \right\}$$

$$3) \left\{ (-2, 1), (1, 3), (3, 9), (-1, 1) \right\}$$

$$4) \left\{ \left(\frac{3}{2}, \frac{5}{2}\right), (3, -1), (1, -2) \right\}$$

$$\text{Dgnf} = \{2, 3, -2\}$$

$$\text{حاصل} = \{(2, 5), (3, 5), (-2, 4)\}$$

$$D_f \Rightarrow [0, 3] - \{1\} \quad D_f \cap D_g = [0, 3] - \{1\}$$

$$D_g = \mathbb{R}$$

$$\left(\frac{f}{g}\right)(x) \rightarrow \frac{[x] + [-x] + 1}{[x] + [-x] - 1} = 0 \Rightarrow D \rightarrow \{x \mid x \in \mathbb{Z}, x \neq 1\} \Rightarrow D_f = \{0, 1, x\}$$

$$Df = \sqrt{a(x-x)^2 - \varepsilon} \rightarrow Df = [1, \varepsilon] \Rightarrow Dg \cap F = \{1, 2, \varepsilon\}$$

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$$h(x) = \{(1,0), (2,0), (3,1)\}$$

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

$$a) x^3 - 3x^2 + 3x - 1 + 1 \Rightarrow (x-1)(x^2 + x + 1) - 3x(x-1) + 1 = (x-1)(x^2 + x + 1 - 3x + 3) = (x-1)(x^2 - 2x + 4)$$

$$y-1 = (x-1)^3 \Rightarrow x-1 = \sqrt[3]{y-1} + 1 \Rightarrow R_f = \mathbb{R}$$

$$b) yx^2 - 2xy = 1 \Rightarrow yx^2 - 2xy - 1 = 0 \quad \Delta = 4y^2 + 4y \Rightarrow -2y = \sqrt{4y^2 + 4y} \Rightarrow$$

$$4y^2 + 4y \geq 0 \Rightarrow y \geq -1 \Rightarrow (-\infty, -1] \cup (0, \infty) = R_f$$

$$a) x = -\frac{b}{a} = 1 \quad y = 0 \quad R_f = [1, \infty)$$

$$b) x = -\frac{b}{a} = 3 \quad y = 12 \quad R = (-\infty, 12]$$

$$c) x = -\frac{b}{a} = 1 \quad y = -7 \quad R = [0, \infty)$$

$$d) x = 3 \quad y = 4 \quad R = [0, 3]$$

$$a) \mathbb{R}$$

$$b) \mathbb{R}$$

$$c) [0, \infty)$$

$$d) [0, \infty)$$

$$a) \mathbb{R} - \left\{\frac{1}{2}\right\} \Rightarrow \mathbb{R} - \{2\}$$

$$b) \mathbb{R} - \left\{\frac{1}{2}\right\} \Rightarrow \mathbb{R} - \{2\}$$

$$Df \rightarrow \Delta u - u^r - \varepsilon \gamma. \rightarrow u^r - \Delta u + \varepsilon \gamma. \rightarrow 1 \leq n \leq 2$$

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$$Df \cap Dg = \{1, 2, 3\}$$

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