

$$f(x) = \sqrt{5x - x^2 - 4} \quad , \quad g(x) = \{(1,0)(2,1)(3,4)(0,1)\} \quad (9)$$

$\begin{matrix} (x-1)(x-2) \leq 0 \\ \Rightarrow x \in [1,2] \end{matrix} \quad \begin{matrix} \sum \\ \text{of } g(x) = \{1, 1, 5, 0\} \end{matrix} \quad \hookrightarrow h(x) = \frac{f(x)}{g(x)} ?$

$$h(x) \rightarrow \{1, 2, 3\} \quad \begin{cases} 1 \Rightarrow \cdot \\ 2 \Rightarrow \frac{1}{2} = 1 \\ 3 \Rightarrow \frac{1}{3} = \cdot \end{cases} \quad \Rightarrow h(x) = \{(1,0)(2,1)(3,0)\}$$

$$(a) \rightarrow (x-1)^2 = y \rightarrow x-1 = \sqrt[3]{y} \rightarrow x = \sqrt[3]{y} + 1 \Rightarrow R_f = \mathbb{R} \quad (10)$$

$$b) \quad y = x^2 - 2x - 1 \rightarrow x = \frac{2y \pm \sqrt{4y^2 + 4y}}{2} = \frac{2y \pm 2\sqrt{y^2 + y}}{2} = y \pm \sqrt{y^2 + y}$$

$$y = \cdot \rightarrow x = \cdot \quad y = 0 \rightarrow x = 1 \quad y = 1 \rightarrow x = 2$$

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

$$(a) \quad x = \frac{2}{y} \rightarrow y = 2 \rightarrow R = [2, +\infty) \quad (11)$$

$$b) \quad \left| \frac{-4}{-2} = 2 \right| \quad \frac{-4}{-2} = 2 \Rightarrow R = (-\infty, 2)$$

$$2) \quad \left| \frac{2}{-1} = -2 \right| \rightarrow \sqrt{(-2)^2 + \infty} \Rightarrow R_f = [-2, +\infty)$$

$$3) \quad \left| \frac{-4}{-1} = 4 \right| \quad \sqrt{(-4)^2 + \infty} \Rightarrow R = [4, \infty)$$

$$(a) \quad R_f = \mathbb{R}, \quad b) \quad R_f = \mathbb{R}, \quad 2) \quad R_f = [1, +\infty) \Rightarrow R_f = \mathbb{R} \quad (12)$$

$$(a) \quad x = \frac{x+1}{x-1} \rightarrow R = \{1\} \quad (13)$$

$$b) \quad y = \frac{x+1}{x-1} \rightarrow R = \{1\}$$