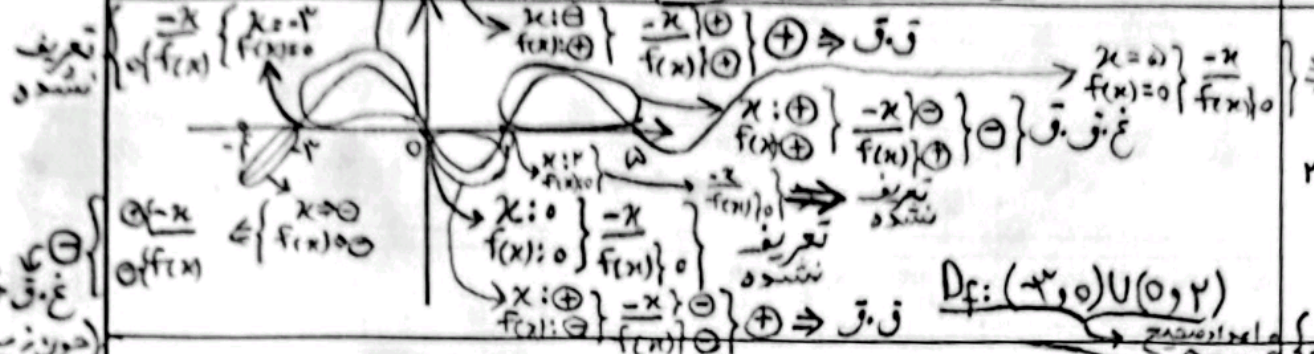
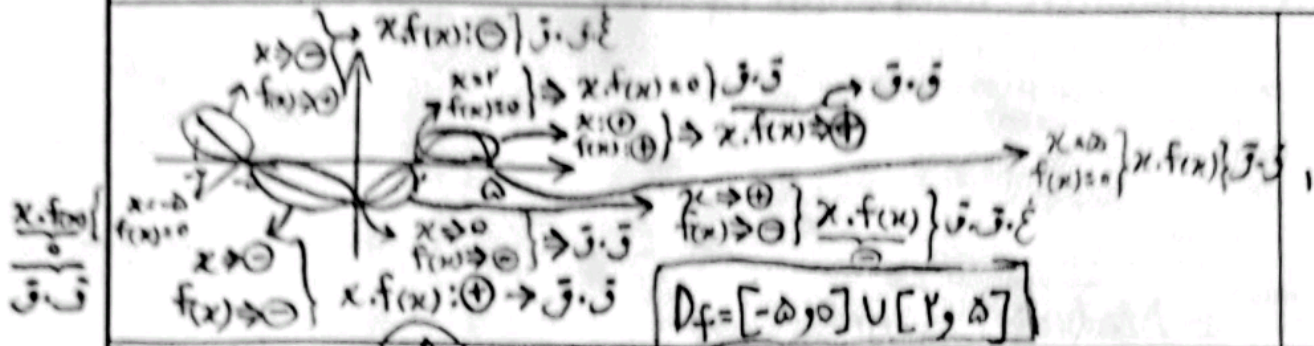




$$f(x) - r f(r) = x^2 - r^2 x + r$$

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

$$f(-r) - \frac{f(r)}{+f} = \left\{ \frac{f+y+f}{1f} \right\} f(-r) = \boxed{10}$$

$$f(x) = \begin{cases} x - \sqrt{x+1} & x > 1 \\ 1 & x \leq 1 \end{cases}$$

$$f(\omega) = \omega - \sqrt{\omega^2 + \kappa} = \gamma$$

$$f(r) = f + w = V$$

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

$$\underbrace{f(\underbrace{f(2)})}_{\substack{\uparrow \\ \text{v}}} + \underbrace{f(\underbrace{f(1)})}_{\substack{\uparrow \\ \text{r}}} = \boxed{9}$$

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

$$f(x-1) - f(x) = 4x + 2$$

$$f(x-1) = \underbrace{a(x-1)^2}_{2+1-2x} + \underbrace{b(x-1)}_{-bx+b} + c$$

$$f(x-1) - f(x) = \cancel{ax^2} + a - \cancel{2ax} - \cancel{bx} + b + \cancel{1} - \cancel{ax^2} + \cancel{2ax} - \cancel{bx} \Rightarrow y = a + b - \cancel{bx} - \cancel{bx}$$

$$f(x) = x^r - 3x + 1$$

$$\frac{f'(r) + f(-1)}{f'(r)} = \frac{r \cdot (9 - 9 + 1) + (1 + 3 + 1)}{(1 - 9 + 1)^2} = \boxed{1}$$

$$f(x) = \begin{cases} 3x + 1 & x \geq 2 \\ x^2 & x < 2 \end{cases}$$

$$\frac{f'(f) - f'(-r)}{f(r)} = \frac{3(12 + 1) - 2(-2)^2}{3(2) + 1} = \boxed{\frac{31}{7}}$$

$$f = \{(2, 2), (3, 2), (4, 1), (1, 4)\}$$

$$\frac{f(f(x)) - f(f(x))}{f(x) - 2} = \frac{0}{f} = \boxed{0}$$

$$f(x) = \frac{x^2 + 5x + 9}{x^2 + 5x + 5}$$

$$f(f(\sqrt{3} - 2)) = f(2) = \frac{2^2 + 5 \cdot 2 + 9}{2^2 + 5 \cdot 2 + 5} = \boxed{\frac{21}{17}}$$

$$\frac{(\sqrt{3} - 2)^2 + 5(\sqrt{3} - 2) + 9}{(\sqrt{3} - 2)^2 + 5(\sqrt{3} - 2) + 5} = \frac{3 + 5\sqrt{3} - 8 + 9}{3 + 5\sqrt{3} - 8 + 5} = \frac{4}{1} = \boxed{4}$$

$$f(x) = x^2 + \frac{1}{x^2}$$

$$(f(\sqrt{x}))^2 - f(x) = \left(x + \frac{1}{x}\right)^2 - x^2 - \frac{1}{x^2} = x^2 + \frac{1}{x^2} + 2 - x^2 - \frac{1}{x^2} = \boxed{2}$$

(انبار سعاداتیان دهم پسر A تکلیف شماره ۷)