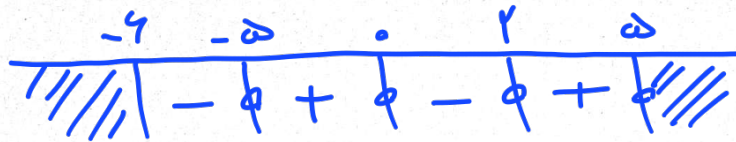


$$y = \sqrt{x f(x)} \rightarrow x f(x) \geq 0 \rightarrow D_f = [-6, \infty) \cdot ([0, 2) \cup [4, \infty))$$

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$$D_f = [-5, 0] \cup [2, 5]$$

$$y = \sqrt{\frac{-x}{f(x)}} \rightarrow \frac{-x}{f(x)} \geq 0 \rightarrow D_f = (-3, 0) \cup (0, 2) \rightarrow \frac{2}{-1} = -2$$

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$$x = 2 \rightarrow f(2) - 2f(2) = 1 - 2 + 2 \rightarrow -f(2) = 2$$

$$x = -2 \rightarrow f(-2) - \overset{+1}{2}f(2) = 4 - 2 + 2 \rightarrow f(-2) = 1$$

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$$f(f(\infty)) = f(2) \rightarrow f(2) = 1$$

$$f(f(1)) = f(\infty) \rightarrow f(\infty) = 2$$

$$1 + 2 = 3$$

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$$x = 1 \rightarrow f(x) = a - b + 2$$

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

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

$$2 - a + b - 2 = 4 \cdot 2$$

$$b - a = 1$$

$$a - b = -1$$

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$$u^r + ru = (u^r + ru + r) - r = (u+r)^r - r$$

⑥ $\frac{(\sqrt{r}-1)^r + 1 (\sqrt{r}-1) \cdot \omega}{(\sqrt{r}-1)^r + 1 (\sqrt{r}-1) \cdot \nu} = \frac{1 - \cancel{1} \sqrt{r} + 1 \sqrt{r} - 1 + \omega}{1 - \sqrt{r} + \sqrt{r} - 1 + \nu} = \frac{\omega}{\nu} = \frac{r}{r}$

$$f(u) = \frac{(u+r)^r + 1}{(u+r)^r + r} \rightarrow f(\sqrt{r}-1) = \frac{r}{r}$$

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

$$f(x) = x^r + r \rightarrow f(-r) = 1 + r = 11 \quad \checkmark \quad \textcircled{r}$$

$$g(x) = \sqrt{9-x^2} \rightarrow g(x) = 9-x^2 \geq 0 \rightarrow 9 \geq x^2 \rightarrow 3 \geq x \geq -3$$

$$Dg \cap D_f = \{r, 1, 0\} \quad \frac{f}{g} = \{(0, \frac{r}{r}), (1, \sqrt{r}), (r, 0)\}$$

$$\frac{g}{f} = \{(0, \frac{r}{r}), (1, -\frac{\sqrt{r}}{r}), (r, -\frac{r}{r})\} \quad \checkmark \quad \textcircled{r}$$

$$r f(x) = \{(r, r), (r, 1), (-\omega, r), (1, -r)\}$$

$$f_{r+1} = \{(r, r), (r, \omega), (-\omega, r), (1, -1)\} \quad \checkmark$$

$$r f(x) + 1 = \{(r, r), (r, r+1), (-\omega, r+1), (1, r+1)\}$$

$$f(r) = \{(r, 1), (r, r), (-\omega, r), (r, -r)\} \rightarrow \{(1, 1), (\frac{r}{r}, r), (-\frac{\omega}{r}, r), (\frac{1}{r}, -r)\}$$

$$f-g = \{(r, r), (1, r), (r, 1)\}$$

$$\frac{r f}{g} = \{(r, r), (1, \frac{r}{r}), (r, -r)\} \quad \checkmark \quad \textcircled{r}$$