

نام و نام خانوادگی آرمین زریانی پاسخنامه تشریحی تکلیف شماره ۷۷ کلاس دهم A

$$y = \sqrt{x f(x)} \rightarrow x f(x) \geq 0$$

$\downarrow$ $\downarrow$
 $x=0$ $x=-\infty, 1, \infty$

$$Df = [-\infty, 0] \cup [1, \infty]$$

✓

$$y = \sqrt{\frac{-x}{f(x)}} \rightarrow x \leq 0$$

$\downarrow$
 $x=0, -2, 2, \infty$

$$\frac{-x}{f(x)} \geq 0$$

$$Df = (-\infty, 0) \cup (0, 2)$$

✓

$$f(x) - 2f(x) = \varepsilon - \delta + \varepsilon, \quad 2 \rightarrow -f(x) \leq 2 \rightarrow f(x) \geq -2$$

$$f(-2) + \varepsilon = 1 \varepsilon \rightarrow \boxed{f(-2) \leq 1}$$

✓

$$f(f(\infty)) + f(f(1)) = ?$$

$$7 + 7 = \boxed{14}$$

$$\omega \sqrt{4} = 2, \quad f(\infty) = 7$$

$$f(1) = 7$$

✓

$$a(n-1)^2 - b(n-1) + 2 - an^2 + bn - 2 = 4n + 2$$

$$a - b = -3 - \omega = \boxed{-1}$$

$$an^2 + a - 2an - b + b - an^2 + bn = 4n + 2$$

$$a + b - 2an = 4n + 2 \rightarrow -2an = 4n$$

$$\frac{1}{2} + b = 2 \rightarrow \boxed{b = 0}$$

$$\boxed{a = -3}$$

✓

$\frac{r f(r) + f(-1)}{f'(r)} = ? \quad f(r) = 1$ $\frac{r + 0}{1} = 1$ $f(-1) = 0$ $f(r) = 1$	6
$\frac{r f(r) - r f(-r)}{f(r)} = ? \quad \frac{r^4 - 1}{r} = \frac{r^3 - 1}{1}$ $f(r) = 1^r$ $f(-r) = 1$ $f(r) = r$	7
$\frac{f(f(r)) - f(f(r))}{f(1) - r} \quad f(r) = r = \frac{r - r}{r} = \frac{0}{r} = 0$ $f(r) = r$	8
$f(x) = \frac{x^2 + 8x + 4}{x^2 + 8x + 0}$ $f(\sqrt{x} - r) = \frac{(\sqrt{x} - r)^2 + 8(\sqrt{x} - r) + 4}{(\sqrt{x} - r)^2 + 8(\sqrt{x} - r) + 0}$ $\frac{(\sqrt{x} - r)^2 + 8(\sqrt{x} - r) + 4}{(\sqrt{x} - r)^2 + 8(\sqrt{x} - r) + 0} = \frac{r^2 + 8r + 4}{r^2 + 8r + 0} = \frac{r^2 + 8r + 4}{r^2 + 8r}$	9
$f(x) = x^r + \frac{1}{x^r}$ $\left(x + \frac{1}{x}\right)^r = x^r + \frac{1}{x^r} + r$ $x^r + \frac{1}{x^r} - x^r - \frac{1}{x^r} + r = r$	10