

۹۶	-	-۶	-۵	-۵	+	۲	+	۵	+
f(x)	-	+	+	-	-	+	+	+	-
	-	-	-	+	-	+	+	+	-

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

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- ۹۶	+	-۶	-۶	+	۰	-۲	-۵	-
f(x)	-	-	-	+	+	-	+	-
	-	-	-	+	+	-	+	-

$(-1, 0) \cup (0, 2) \rightarrow -2, -1, 0, 1$

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$$x=2 \rightarrow f(2) - 2 \cdot f(2) = 9 - 4 + 4 - 2 \cdot 2$$

$$-f(2) = 2 \rightarrow f(2) = -2$$

$$96 = -2 \rightarrow f(-2) - 2 \cdot f(2) = 9 + 4 + 4 = 17$$

$$f(-2) + 4 = 17$$

$$f(-2) = 13$$

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$$f(f(\omega)) + f(f(1))$$

$$f(2) + 2 = 9$$

$$f(1) \rightarrow 4 + 3 \rightarrow 7$$

$$f(\omega) \rightarrow 0 - \sqrt{4} \rightarrow 2$$

$$f(2) \rightarrow 9 + 4 \rightarrow 13$$

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

$$f(x-1) - f(x) \rightarrow (ax^2 - 2ax + a - bx + b + 2) - (ax^2 - bx + 2)$$

$$f(x-1) - f(x) \rightarrow -2ax + a + b \rightarrow -2ax + a + b = 4x + 2 \rightarrow a = -2$$

$$a \cdot b \rightarrow -2 \cdot \omega = -2 \rightarrow \omega = 1$$

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

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$$\frac{v - 4\sqrt{v} + 4\sqrt{v} - 8 + 8}{v - 4\sqrt{v} + 4\sqrt{v} - 8 + v} = \frac{1}{4} = \frac{1}{4}$$

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$$\frac{9x^4}{9x^4} \rightarrow \frac{1}{2x} \rightarrow 9x^2 + \frac{1}{9x^2} \rightarrow \left(x + \frac{1}{x}\right)^2 + 1 \rightarrow f(x) = x^2 + 1$$

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$$(-1)^2 + 1 = 1 + 1 = 2$$

$$g(x) = \{(-2, 0), (-2, \sqrt{2}), (-1, \sqrt{2}), (0, 3), (1, \sqrt{2}), (2, \sqrt{2}), (3, 0)\}$$

$$g(x) \rightarrow 9 \cdot x^2 \geq 0$$

$$x \in \mathbb{R}$$

$$D \rightarrow [3, 2]$$

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الف) $\{(-2, 0), (-2, \sqrt{2}), (-1, \sqrt{2}), (0, 3), (1, \sqrt{2}), (2, \sqrt{2}), (3, 0)\}$

ب) $\{(-2, 0), (-2, \sqrt{2}), (-1, \sqrt{2}), (0, 3), (1, \sqrt{2}), (2, \sqrt{2}), (3, 0)\}$

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الف) $2f(x) \rightarrow \{(2, 2), (2, 8), (-\infty, 4), (1, -4)\}$

ب) $f(x) \rightarrow \{(2, 2), (2, 8), (-\infty, 3), (1, -1)\}$

ج) $3f^2(x) + 1 \rightarrow \{(2, 4), (3, 49), (-\infty, 13), (1, 13)\}$

د) $f(2x) \rightarrow \{(2, \frac{1}{2}), (2, 2), (-\infty, 1), (1, -1)\}$

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الف) $f \cdot g \rightarrow \{(2, 2), (1, 4), (3, 4)\}$

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ب) $\frac{f}{g} \rightarrow \{(2, \frac{1}{2}), (1, \frac{1}{4}), (3, \frac{1}{2})\} \rightarrow \{(2, 4), (3, 2)\}$

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