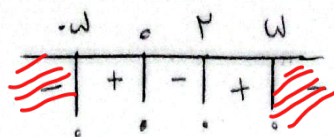


$f(x)$
↓
 $2, \omega \rightarrow y=0$



$xf(x) \geq 0$

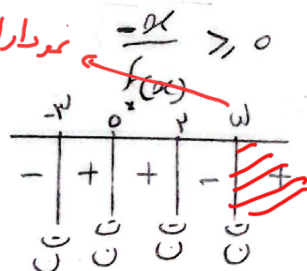
$D_f = [-\omega, 0] \cup [2, \omega]$

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$f(x)$
↓
 $-3, 0, 2, \omega \rightarrow y=0$

معدلات را در نظر



$D_f = (-3, 0) \cup (0, 2) \cup (\omega, \infty)$

شامل ۳ عدد صحیح $\Leftarrow -2, -1, 0$

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$f(x) - 2f(x) = 4 - 6 + 4$
 $-f(x) = 2$
 $f(x) = -2$

$f(-2) = 2^2 - 2 \cdot 2 + 4 - 4$
 $f(-2) = 4 + 6 = 10$

$(2) \checkmark$

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$f(f(1))$
↓
 $2+3=\omega$

$f(\omega) = \omega - \sqrt{9} = 2$

$f(f(\omega))$
↓
 $\omega - \sqrt{9} = 2$

$f(2) = 4 + 3 = 7$

$7+2=9$

$(2) \checkmark$

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$a(x^2 - 2x + 1) - b(x-1) + 2 - ax^2 + bx + 2 = 9x + 2$
 $ax^2 - 2ax + a - bx + b + 2 - ax^2 + bx - 2 = 9x + 2$
 $-2a = 9$
 $a = -\frac{9}{2}$
 $b + a = 2$
 $-\frac{9}{2} + b = 2$
 $b = \frac{13}{2}$
 $a - b = -\frac{9}{2} - \frac{13}{2} = -11$

$(2) \checkmark$

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$$f(w) = 9 - 9 + 1 = 1$$

$$f(-1) = 1 + 1 + 1 = 3$$

$$f'(v) = 8 - 9 + 1 = -1 \quad (-1)^v = 1$$

$$\frac{v \times 1 + 1}{1} = v$$

Ⓟ ✓

$$f(e) = 12 + 1 = 13$$

$$f(-v) = 4$$

$$f(v) = 9 + 1 = 10$$

$$\frac{v \times 13 + -v \times 4}{v} = \frac{v \times 9 - 1}{v} = \frac{v \times 1}{v}$$

Ⓟ ✓

$$f(f(e))$$

↓

$$f(1) = 6$$

$$f(f(w))$$

↓

$$f(v) = 4$$

$$f(1) = 6$$

$$\frac{6-6}{6-4} = \frac{0}{2} = 0$$

Ⓟ ✓

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

$$f(\sqrt{v}-v) = \frac{(\sqrt{v})^v + 1}{(\sqrt{v})^v + 1} = \frac{1}{1} = 1$$

$$f(v) = \frac{v^v + 1}{v^v + 1} = \frac{v \times 1}{1 \times 1}$$

Ⓟ ✓

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

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

$$x^2 + \frac{1}{x^2} + 2 - x^2 - \frac{1}{x^2} = 2$$

Ⓟ ✓