

A هم پر

۱۴۰۵/۷/۹

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NOTEBOOK

SUBJECT

۱- $x f(x) \geq 0$ / $x=0, 2, -5$ / $[2, 5] \cup [-5, 0]$
 $(0, -5) = +0$ $(0, 2) = -$ $(2, 5) = +0$

۲- $f(x) = (x-3)^2 - 4$ / $(2, 0)$ / $(-2, -4)$ / $(2, 0)$ / $(-2, -4)$ / $(2, 0)$ / $(-2, -4)$
 $f(x) > 0 \rightarrow -3 < x < 0$ / $-x < 0 \rightarrow f(x) < 0 \rightarrow 0 < x < 2$
 $(-2, 0) \cup (0, 2)$ / $(1, -1)$ / $(2, 0)$

۳- $f(2) - 2f(1) = 4 - 4 + 4 \rightarrow f(2) = -2$
 $x = -2 \rightarrow f(-2) + 4 = 14 \rightarrow f(-2) = 10$

۴- $f(5) = 5 - \sqrt{5+4} = 2$ / $f(f(5)) = f(2) = 7$
 $f(1) = 5$ / $f(f(1)) = f(5) = 2 \rightarrow 7+2=9$

$f(x-1) = a(x-1)^2 - b(x-1) + 2 = ax^2 - 2ax + a - bx + b + 2$
 $(ax^2 - 2ax + a - bx + b + 2) - (ax^2 - bx - 2x + b + a) =$
 $(-2a)x + (a+b) - 2a = 4 \rightarrow a = -2 \rightarrow -2+b = 5 \rightarrow b = 7$
 $-2-5 = -7$

$f(2) = 9 - 9 + 1 = 1$ / $f(-1) = 4 - 4 + 1 = 1$ / $f(1) = 1$
 $\frac{2+5}{1} = 7 \rightarrow 2=1$ / $4=9$ / $5=-1$ / $9=7$

$x \geq 2 \rightarrow f(x) = x(x) + 1 = 13$
 $-2 < x < 2 \rightarrow f(x) = (x)^2 = 4$
 $x < -2 \rightarrow f(x) = x(x) + 1 = 7$

$\frac{f(13) - f(4)}{1} = \frac{13}{1}$

$$f(1) = 4 / f(4) = 1 / f(2) = 2 / f(2) = 4 \quad -1$$

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

$$x = \sqrt{3} - 2 \quad \text{جائیداری می کنیم} = \frac{1}{1-2\sqrt{3}} \quad -9$$

$$\text{مخرج نوی} = \frac{14+4\sqrt{3}}{13} \rightarrow \text{جای x می گذاریم} = \frac{2451+224\sqrt{3}}{1545+222\sqrt{3}}$$

$$\text{کوتا کردن} = \frac{22221-524\sqrt{3}}{15527}$$

$$\sqrt{x}^2 + \frac{1}{\sqrt{x}^2} = x + \frac{1}{x} \quad -10$$

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

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