

$$f(n^r + n) = 2n^r - 1$$

$$f(r) + f(10) = ?$$

$$n=1 \rightarrow f(1+1) = f(r) = 2(1) - 1 = 1$$

$$n=2 \rightarrow f(1+2) = f(10) = 2(r) - 1 = 2V$$

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$$f(r) + f(10) = 2V + 1 = 1$$

$$f(n) = (n^r - 9n^r + 12n - 1) + 1 \rightarrow (n-r)^r + 1 \quad f(\sqrt{r}+r) = (\sqrt{r}+r-r)^r + 1 = 1$$

$$g(n) = (n^r + 9n^r + 12n + 2V) - 2V \rightarrow (n+r)^r - 2V \quad g(\sqrt{r}-r) = (\sqrt{r}-r+r)^r - 2V = -2$$

$$\frac{g(\sqrt{r}-r)}{f(\sqrt{r}+r)} = ?$$

$$\frac{-2}{1} = -2$$

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V

$$f(n) = \sqrt{n-r} + \sqrt{n-r} + r \rightarrow \sqrt{(\sqrt{n-r}+r)^2} = \sqrt{n-r} + r \quad (= |n \geq r)$$

$$g(n) = \sqrt{n-r} - \sqrt{n-r} + r \rightarrow \sqrt{(\sqrt{n-r}-r)^2} = |\sqrt{n-r} - r|$$

$$f(n) + g(n) = a + b\sqrt{n+c}$$

$$\sqrt{n-r} + r + \sqrt{n-r} - r = 2\sqrt{n-r} \rightarrow \frac{0+1}{-r} = -\frac{1}{r}$$

$$\frac{a+b}{c} = ?$$

$$\begin{aligned} a &= 0 \\ b &= 2 \\ c &= -r \end{aligned}$$

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$$f(n) = \frac{n+r}{n^r - rn + r}$$

$$g(n) = \{(r,1), (1,0), (r,0), (0,r)\}$$

$$\frac{g}{f} = ?$$

$$\frac{g}{f} \Rightarrow \{(r, \frac{r}{f}), (0, r)\}$$

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

$$D_f = R - \{r, 1\} \quad D_g \cap D_f = \{r, 0\}$$

$$D_g = \{r, 1, r, 0\}$$

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$$f(n) = \{(1,2), (3,-1), (5,2), (-1,4)\}$$

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

$$f(rn) \rightarrow \{(\frac{r}{f}, 2), (\frac{r}{f}, -1), (r, 2), (-1, 4)\}$$

$$r_n = 1 \rightarrow n = \frac{1}{f}$$

$$r_n = r \rightarrow n = \frac{r}{f}$$

$$r_n = -1 \rightarrow n = -\frac{1}{f}$$

$$2g^r(n) + 1$$

$$\{(-1,9), (1,3), (3,4), (-1,1)\}$$

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

$$f(n^r)$$

$$n^r = 1 \rightarrow n = \pm 1$$

$$n^r = r \rightarrow n = \pm \sqrt{r}$$

$$n^r = -1 \rightarrow n = \pm i$$

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

$$D_f \cap D_g = \{1, r, -1\}$$

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(تکلیف شماره ۵)

< فاصله مکانی >

19, 17, 8

(بازدهی رفته B)

$$f(x) = \left(\frac{1}{r}\right)^{n-r} - 1 = r^{r-n} - 1$$

$$f(n+1) = r^{r-n-1} - 1 < r^{r-n} - 1$$

$$y = \sqrt{x^r f(n+1)}$$

$$x^r (r^{r-n} - 1) \geq 0$$

$$D_f = ?$$

		0	1	
x^r	-	0	+	+
$r^{r-n} - 1$	+	+	0	-
	-	0	+	-

$$0 \leq x \leq 1$$

$$D_f = [0, 1]$$

$$f(x) = \sqrt{x + |x+2|}$$

$$f(-x) = \sqrt{-x + |-x+2|}$$

$$f(-x) \text{ مساوی } = ?$$

$$\begin{array}{l} -x+2 \\ \hline x \leq 2 \end{array} \quad \begin{array}{l} -x+x-2 = -2 \\ \hline \text{مثبت از ۲، کمتر از ۲} \end{array}$$

$$-x+2 \geq 0$$

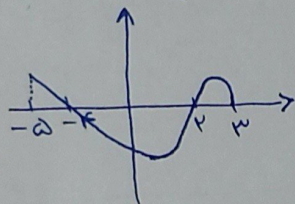
$$\begin{array}{l} 2 \geq x \\ 1 \geq x \end{array}$$

$$x \leq 1$$

$$D_f = (-\infty, 1]$$

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

$$D_y = ?$$



	-0	-f	1	2	3
$f(x)$	0	+	0	-	-
$x-1$	-	-	-	0	+
	0	0	+	0	+

$$D_f = (-f, 1] \cup (2, 3)$$

$$y_1 = \frac{1}{9n^r - 5n^r - f_{n-r}}$$

$$y_2 = \frac{1}{r_{n-r} + an + b}$$

$$\sqrt{-(a+b)} = ?$$

$$\frac{(9n^r - 5n^r + 1) - n^r - f_{n-r}}{(r_{n-r} - 1)^r - (n+2)^r}$$

$$r = -1 \leq y_1, y_2 \text{ مساوی}$$

$$(r_{n-r} - 1)^r - (n+2)^r \neq 0 \rightarrow$$

$$\begin{array}{l} r_{n-r} - 1 = n+2 \\ r_{n-r} - n - 2 = 0 = r_{n-r} + an + b \end{array}$$

$$\sqrt{-(a+b)} = \sqrt{f} = 2$$

$$\begin{array}{l} a = -1 \\ b = -2 \end{array}$$

$$f(x) = x^r + n$$

$$y = \sqrt{f(x) - f\left(\frac{r}{n}\right)}$$

$$\text{مساوی} = ?$$

$$\sqrt{x^r + n - \frac{r^r}{n^r} - \frac{r}{n}} \rightarrow \text{مساوی}$$

$$x^r - \left(\frac{r}{n}\right)^r + n - \frac{r}{n} - \left(n - \frac{r}{n}\right) \left(n^r + \left(\frac{r}{n}\right)^r + r\right) + \left(n - \frac{r}{n}\right) \geq 0$$

$$\left(n - \frac{r}{n}\right) \left(n^r + \left(\frac{r}{n}\right)^r + r + 1\right)$$

$$D_f = [-r, 0) \cup (r, +\infty)$$

$$n - \frac{r}{n} \geq 0$$

	-r	0	r	
	-	+	-	+