

$$x f(x) \geq 0$$

	$-\infty$	0	2	∞
$A(x)$	+	-	+	+
x	-	+	+	+
	-	+	+	+

$$Df = [-\infty, 0] \cup [2, \infty)$$

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

	$-\infty$	0	2	∞
$f(x)$	-	+	+	-
$-x$	+	+	-	-
	-	+	+	-

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

$$-2, -1, 1 \Rightarrow \frac{1}{x}$$

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

$$-f(2) = 2$$

$$f(2) = -2$$

$$x=2 \rightarrow f(2) - \frac{2f(2)}{+2} = 4 + 4 + 2 = 10$$

$$f(2) = 10$$

$$f(1) \Rightarrow x=1 \Rightarrow 1+3=4$$

$$f(4) \Rightarrow x=4 \Rightarrow 4 - \sqrt{4+5} = 2$$

$$f(2) \Rightarrow x=2 \Rightarrow 4+3=7$$

$$\frac{f(f(4))}{4} + \frac{f(f(7))}{7} = 1 + 2 = 3$$

$$x=0 \Rightarrow f(0) = (0)a^2 + (a)b + 2 = 2$$

$$x=1 \Rightarrow f(1) - f(1) = 4 + 2$$

$$f(1) = -4 \xrightarrow{x=1} -4 = a - b + 2$$

$$a - b = -6$$

$\frac{\sqrt[r]{r(r-1)+1} + \sqrt[r]{(1+r+1)}}{\frac{(r-1+1)^r}{f^r(r)}} = \frac{r+1}{1} = v$	$f(x) = n^r - n + 1$	6
$\frac{\sqrt[r]{r(1+r)} - \sqrt[r]{r(r)} }{v} = \frac{r+1}{v} = \frac{r}{v}$	$\left. \begin{array}{l} r n + 1, \quad n \gg r \\ n^r, \quad n < r \end{array} \right\}$	7
$f(r) \Rightarrow r(r+1) = 1^r$ $f(r) \Rightarrow (r+1)^r = r$	$f(r) = r(r) + 1 = v$	
$\frac{\sqrt[4]{f(f(r))} - \sqrt[4]{f(f(r))}}{f(1) - r} = 0$		8
$\frac{n^r + r n + r^2 + \omega}{n^r + r n + r^2 + 1} = \frac{n^r + r n + r^2 + \omega}{n^r + r n + r^2 + 1} = \frac{(n+r)^r + \omega}{(n+r)^r + 1}$		9
$f(\sqrt{r}-r) = \frac{(\sqrt{r}-r+r)^r + \omega}{(\sqrt{r}-r+r)^r + 1} = \frac{1}{r} = r$	$f(r) = \frac{(r+r)^r + \omega}{(r+r)^r + 1} = \frac{r}{1+r}$	10
$f(\sqrt{n}) = n^{\frac{1}{2}} + \frac{1}{n}$ $(f(\sqrt{n}))^r = (n + \frac{1}{n})^r = n^r + \frac{1}{n^r} + r$ $f(n) = n^{\frac{1}{2}} + \frac{1}{n^r}$	$(f(\sqrt{n}))^r - f(n) = n^r + \frac{1}{n^r} + r - n^{\frac{1}{2}} - \frac{1}{n^r} = r$	11