

پایان آزمون

$x f(x) \geq 0$

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

✓

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

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

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

✓

$Df = (-3, 2) - \{0\}$

$-2, -1, 1 \rightarrow 3$

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

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

✓

$f(1) \Rightarrow x=1 \Rightarrow 1+3=4$
 $f(4) \Rightarrow x=4 \Rightarrow 4 - \sqrt{4+4} = 2$
 $f(2) \Rightarrow x=2 \Rightarrow 4+3=7$

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

✓

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

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

✓

$f(1) = -4 \xrightarrow{x=1} -4 = a - b + 2$
 $a - b = -6$

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