

$$x f(x) \geq 0 \quad \left\{ \begin{array}{l} \text{مجموعه اول: } [2, 5] \\ \text{مجموعه دوم: } [-5, 0] \\ \text{مجموعه سوم: } [0, 2] \end{array} \right\} \xRightarrow{U} D_f = [2, 5] \cup [-5, 0]$$

$$\begin{array}{c} \text{①} \quad \text{②} \\ \text{③} \quad \text{④} \end{array} \quad \begin{array}{c} \text{①} \\ \text{②} \end{array} \quad \begin{array}{c} \text{③} \\ \text{④} \end{array} \quad \begin{array}{c} \text{⑤} \\ \text{⑥} \end{array}$$

$$f(x) \neq 0 \quad \frac{-x}{f(x)} \geq 0 \quad D_f = (-3, 0) \cup (0, 2)$$

$$f(x): \mathbb{R} \rightarrow \mathbb{R} \quad f(x) = x^2 - 3x + 4 \rightarrow f(2) = 4 - 6 + 4 = 2$$

$$f(-1) = 1 + 3 + 4 = 8$$

$$f(0) = 5 - \sqrt{9} = 5 - 3 = 2 \rightarrow f(1) = 4 + 3 = 7$$

$$f(1) = 1 \times 1 + 3 = 4 \rightarrow f(0) = 5 - \sqrt{9} = 5 - 3 = 2$$

$$v + r = 9$$

$$f(x) = a - b + 2 = -6$$

$$a - b = -8$$

$$f(0) - f(1) = 9 - 4 = 5$$

$$f(0) = 9$$

$$f(1) = 4$$

$\left. \begin{aligned} f(r) &= r^r - r \times r + 1 = 9 - 9 + 1 = 1 \\ \rightarrow r f(r) &= r \times 1 = r \\ f(-1) &= (-1)^r - r(-1) + 1 = 1 + r + 1 = 2 \\ f(r) &= r - r + 1 = 1 \rightarrow f'(r) = (-1)^r = 1 \end{aligned} \right\} \frac{r+0}{1} = \frac{r}{1} = r$	6
$\left. \begin{aligned} f(r) &= 1^r - r f(r) = r \times 9 \\ f(-r) &= (-r)^r = r^r \xrightarrow{r^r = 1} 1 \\ f(r) &= r + 1 = r \end{aligned} \right\} \frac{r \times 9 - 1}{r} = \frac{r \times 1}{r}$	7
$\left. \begin{aligned} f(r) &= 1 \rightarrow f(f(r)) = f(1) = r \\ f(r) &= r \rightarrow f(f(r)) = f(r) = r \\ f(1) &= r \xrightarrow{-r} = r \end{aligned} \right\} \frac{r-r}{r} = \frac{0}{r} = 0$	8
$\left. \begin{aligned} x^r + rx + 9 &= (x+r)^r + 2 \\ x^r + rx + 2 &= (x+r)^r + 1 \end{aligned} \right\} \begin{aligned} f(\sqrt{r}-r) &= \frac{1}{r} = r \\ \text{or} \end{aligned}$ $f(r) = \left(\frac{r}{1r} \right)$	9
$f(\sqrt{n}) = n + \frac{1}{n}$ $(f(\sqrt{n}))^r = n^r + \frac{1}{n^r} + r$ $f(n) = n^r + \frac{1}{n^r}$ $n^r + \frac{1}{n^r} + r - n^r - \frac{1}{n^r} = r$	10