

$$\sqrt{n+f(n)} \rightarrow n, f(n) \geq 0$$

$$[-5, 5] \cup [2, 5]$$

$$\begin{array}{ccccccc} -5 & -2 & 0 & 2 & 5 \\ | & + & | & - & | & + & | \end{array}$$

1

$$\frac{-n}{f(n)} \geq 0, f(n) \neq 0$$

$$\downarrow$$

$$\frac{n}{f(n)} \leq 0$$

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

$$\begin{array}{ccccccc} -5 & -2 & 0 & 2 & 5 \\ | & + & | & - & | & + & | \end{array}$$

2

$$f(-2)$$

$$f(2) - 2f(4) = \frac{4-4}{+5}$$

$$-f(2) = 2$$

$$f(2) = -2$$

$$f(2) = \frac{4-4}{+5} = 2+4+5$$

$$f(2) = 1$$

3

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

$$f(f(4)) \rightarrow f(4) = 5 - \sqrt{4+5} = 2 \Rightarrow f(2) = 2 \times 2 + 2 = 6$$

$$f(f(5)) = 5 + 5 = 9$$

$$f(f(1)) = 2 + 2 = 4$$

$$f(n+1) - f(n) = (n^2 - (n+1)^2) - (bn + b + 1 - an^2 + b(n+1))$$

$$-2a = 4$$

$$a = -2$$

$$-2an + a + b = 4n + 1 \Rightarrow$$

$$a + b = 1 \Rightarrow -2b = 1 \Rightarrow b = -\frac{1}{2}$$

$$-2 - \frac{1}{2} = -\frac{5}{2}$$

5

$$\frac{r(1-q+1) + 1 + \cancel{r+1}}{(1-q+1)^r - 1} = \frac{r+d}{1} = V$$

6

$$\frac{r(\sum x^r + 1) - r(r)}{r \times r + 1} = \frac{r1}{V}$$

7

$$\frac{q - q}{q - r} = \frac{0}{\sum} = 0$$

8

$$\begin{aligned} f(n) &= \frac{n^r + \sum n - 19}{n^r + \sum n + d} = \frac{(n+1)^r + d}{(n+1)^r + 1} \\ \frac{(\sqrt{n} - 12r)d}{(\sqrt{n} - r + r)^r + 1} &= \frac{r+d}{r+1} = \frac{1}{c} = r \end{aligned} \quad \left\{ \begin{array}{l} f(r) = \frac{r^r + d}{r^r + 1} \\ \left(\frac{r1}{1V} \right) \end{array} \right.$$

9

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

$$\left(\left(\sqrt{n} + \frac{1}{\sqrt{n}} \right)^r - r \right) - \left(n^r + \frac{1}{n^r} \right) = 0$$

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

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