

۱) f_{n+1} (این)

۵, ۹, ۱۴, ۲۰
 $\downarrow \quad \downarrow \quad \downarrow$
 $+4 \quad +5 \quad +6$

ب) $f_{n+1} - f_n$

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۲) $\delta(12 + 4x + x^2) = 2x$ (این)

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ب) $t_{6,9} + t_{3,6} + t_{1,3} = 118 + 122 + 124 + 126 = 490$

$t_{69} = 2 \times 29 + 2 = 118$

$t_{20} - t_{10} = t_{10} + 2d - t_{10} = 2d$
 $\Rightarrow 2d = 2 - 2\sqrt{3}$

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$d = 1 - \sqrt{3} = 1 - \sqrt{3}$

$y \times 20^x = 0^y + \delta^2 x \Rightarrow y = \frac{0^y + \delta^2 x}{\delta^2 x} \Rightarrow y = \frac{\delta^2}{\delta^2 x} + 1 \Rightarrow \frac{\delta^2}{\delta^2 y} = 0$

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$f = x + y$

$\Rightarrow y - 2x = 1$

$2x + 1 = f \Rightarrow x = 1$

$xy = 3$

$y = 2x + 1$

$f_{x-1} = 4y + 2x - 1$

$-3, 0, 3, 4$
 $\downarrow \quad \downarrow \quad \downarrow$
 $+3 \quad +3 \quad +3$

$a_f = 4$

$f_y = 2 \Rightarrow y = \frac{1}{2}$

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$a_n = 0, 0, 0, \dots$ $a_n = F_n$
 $b_n = 1, 0, 1, \dots$ $0, 11, 14, \dots$
 $b_{n+1} = 2a_n$ $[1, 1] = 1$ $4n-1 < 4n$
 $b_{n+1} = 2a_n$ $4n < 4n+1$
 $n \in \mathbb{N} \setminus \{1\} \Rightarrow n \in \mathbb{Z}$

$a + a + d + a + d = 11 \Rightarrow 3a + 2d = 11 \Rightarrow 3a + 2d = 11$
 $a + a + d + a + d = 10 \Rightarrow 3a + 2d = 10 \Rightarrow 3a + 2d = 10$
 $\frac{a + d + a + d + a}{3} = \frac{a + d}{2} \Rightarrow \frac{-10 + 11}{-10} = \frac{1}{-10}$

$a + a + d + a + d = 10 \Rightarrow 3a + 2d = 10$
 $a + a + d + a + d = 10 \Rightarrow 3a + 2d = 10$
 $\left. \begin{matrix} 3a + 2d = 10 \\ 3a + 2d = 10 \end{matrix} \right\} \Rightarrow d = 10 \Rightarrow d = 5$
 $\Rightarrow a = 0$
 $a_{10} = a + 9d = 0 + 9 \cdot 5 = 45$

$\frac{x}{y}(a_1 + a_9) = \frac{x}{y}(a_1 + a_9)$
 $a_1 + a_9 = 2a_1 + 8d \Rightarrow 2a_1 = a_9 - 8d \Rightarrow a_1 = \frac{a_9 - 8d}{2}$
 $2a_1 = 2d \Rightarrow a_1 = d$ $\frac{a_1 + 9d}{a_1 + d} = \frac{19a_1}{15a_1} = \frac{19}{15}$

$a_1 = 11$ $a_n = 10$ $\Rightarrow d = \frac{10 - 11}{9} = -\frac{1}{9}$ $a_n = 10n + 11$
 $b_1 = 11$ $b_{k+1} = 11$ $a_k = 11$
 $d' = \frac{11 - 11}{k+1} = 0$ $11 + 11 \left(\frac{-1}{k+1} \right) = 11$
 $\frac{-10}{k+1} = -10 \Rightarrow -10 = -10(k+1) - 10$
 $-10k = -90 \Rightarrow k = 9$