

$$n^r + \frac{1}{r} n(n-1) \Rightarrow 10^r + \frac{1}{r} \times 10(9) \Rightarrow 100 + 9\Delta = 19\Delta \quad \sim$$

$\begin{matrix} 0, 1, r \\ \downarrow \quad \downarrow \quad \downarrow \\ 1 \quad r \quad r \\ \downarrow \\ 1 \end{matrix}$

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

$$a + b + c = 0 \Rightarrow \frac{1}{r} - \frac{1}{r} + 0 = 0 \quad c = 0$$

$$\frac{1}{r} n^r - \frac{1}{r} n \Rightarrow \frac{1}{r} n(n-1) = 11 \Rightarrow n(n-1) = 11 \cdot r$$

$$11(10) = 110 \quad \boxed{n=11} \quad \checkmark$$

$$\Delta, 9, 13 \Rightarrow f(n+1) \Rightarrow f(11) + 1 = \epsilon \Delta$$

$$\Delta, 13, 21 \Rightarrow \Lambda n - 13 \Rightarrow \Lambda(11) - 13 = \Lambda \Delta$$

$$\Lambda \Delta + \epsilon \Delta = \boxed{130}$$

$n:1 \Rightarrow -1$
 $n:r \Rightarrow \frac{1}{r}$
 $n:r \Rightarrow -\frac{1}{r}$
 $n:f \Rightarrow \frac{1}{f}$

$$b_r = (-r)^r - rI \Rightarrow -rV - rI = -fA$$

$$a_K = -\Delta K + rI \Rightarrow -\Delta K + rI = -fA \Rightarrow \frac{-\Delta K}{-\Delta} = \frac{-V}{-\Delta} \Rightarrow \underline{\underline{K=V}}$$

$$t_{10} - t_v = 12 \Rightarrow t_1 + 9d - t_1 - 4d \Rightarrow 5d = 12 \Rightarrow d = \frac{12}{5}$$

$$t_q - t_1 = ? \Rightarrow t_1 + 2d - t_1 \Rightarrow 2d \Rightarrow 2\left(\frac{12}{5}\right) = \boxed{\frac{24}{5}}$$

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$$t_r = v$$

$$t_f = 10 \quad t_r + 2d = 10 \Rightarrow 2d = 10 \Rightarrow d = 5 \quad \text{13b, 11, 10, ...}$$

$$r, 11, \dots \quad \boxed{b_n = 11n - 5}$$

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$$t_n = \frac{r}{0}, \frac{4}{5}, \frac{10}{9}, \frac{16}{11}, \dots \Rightarrow t_n = \frac{fn-r}{r_n+r} \Rightarrow \frac{fn-r}{r_n+r} < \frac{r}{r} \Rightarrow$$

$$r(fn-r) < r(r_n+r) \Rightarrow 11n-5 < 9n+9 \Rightarrow 2n < 14 \Rightarrow n < \frac{14}{2} \Rightarrow n < 7$$

$$\Rightarrow 1 \leq n \leq 6 \Rightarrow \boxed{6}$$

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$$t_n = 4, 9, 14, 19, \dots \quad \boxed{a = -\frac{r}{r}}$$

$$t_n = An_r + Bn$$

$$ra + b = 4 \Rightarrow r\left(-\frac{r}{r}\right) + b = r \Rightarrow \boxed{b = \frac{10}{r}}$$

$$-\frac{r}{r} + \frac{10}{r} + c = 9 \Rightarrow \boxed{c = 0} \quad \left(-\frac{r}{r}\right)n^r + \left(\frac{10}{r}\right)n$$

$$r \times \left(-\frac{r}{r}\right) + 10 \times \left(\frac{10}{r}\right) = -\frac{9}{r} + \frac{10}{r} = \frac{1}{r} \Rightarrow \boxed{r=1}$$

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$$t_n = -4, -1, 2, \dots \quad \boxed{a = 1} \quad r-1 = r \quad \boxed{b = -1} \quad 1 + (-1) - 4 = -4 \quad c = -4$$

$$t_n = n^r - n - 4$$

$$b_r = r1$$

$$b_f = f1 \quad b_r + 2d \Rightarrow \boxed{d = 5} \Rightarrow b_n = 2n + 11$$

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$$n^r - n - 4 = 2n + 11 \Rightarrow n^r - n - 2n = 15 \Rightarrow n(n-3) = 15$$

$$\boxed{n = 9} \Rightarrow 11 - 9 - 4 = 10 + 11 \Rightarrow 44 = 44$$

44 = 44