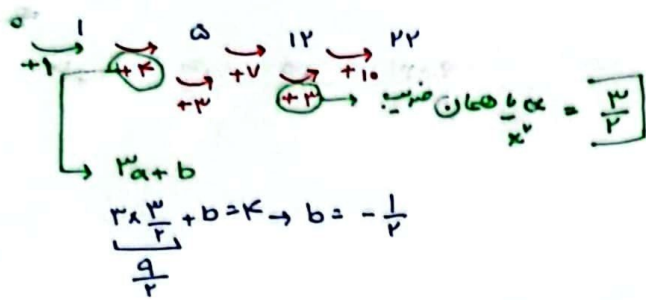


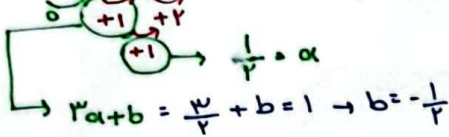


C همان جمله ی صفرم است

$$t_n = \frac{n^2}{2} - \frac{1}{2}n$$

$$t_{10} = \frac{100}{2} - \frac{1}{2} \times 10 = 150 - 5 = 145$$

0, 1, 3, 5, 7, 9, 11, 13, ...



$$t_n = \frac{n^2}{2} - \frac{1}{2}n \rightarrow \frac{1}{2}n^2 - \frac{1}{2}n = 55$$

$$\frac{1}{2}(n^2 - n) = 55$$

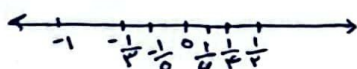
$$n^2 - n = 110 \rightarrow n = 11$$

مجموعه اول = 0 و 1, 3 و 5, 7 و 9, 11 و 13, ...

مجموعه دوم = 0 و 1, 3 و 5, 7 و 9, 11 و 13, ...

$$C = 0$$

$$t_{11} = (11 \times 11 + 1) + (11 - 1) \times 2 + (11 \times 11 + 1) = 130$$



هر چه n بزرگتر حجت به صغر نزدیکتر می شود یعنی می توان گفت به صفر میل می کند پس اولین و دومین جمله کوچکترین و بزرگترین هستند.

$$\frac{1}{2} - (-1) = \frac{3}{2}$$

- $a_1 = -1$
- $a_2 = \frac{1}{2}$
- $a_3 = -\frac{1}{4}$
- $a_4 = \frac{1}{8}$
- $a_5 = -\frac{1}{16}$
- $a_6 = \frac{1}{32}$

$$b_1 = (-1)^1 - 1 \times 1 = -2$$

$$-5n + 22 = -2 \rightarrow -5n = -24 \rightarrow n = 4.8$$

$$k = 14$$

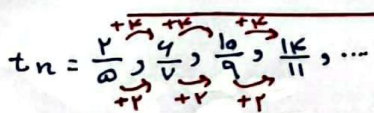
$$10 - 5 = 5 \rightarrow 2d = 10 \rightarrow d = 5$$

$$9 - 1 = 8 \rightarrow 5d \rightarrow 5 \times 5 = 25$$

$$\begin{cases} (2a + b = 1) - 1 \\ 2a + b = 10 \\ 2a = 9 \rightarrow a = 4.5 \end{cases} \quad b = -1$$

$$\begin{cases} a_1 = 14 - 1 = 13 \\ a_2 = 12 - 1 = 11 \end{cases}$$

$$b_n = 14n - 5$$



$$t_n = \frac{n^2 - 1}{2}$$

$$\frac{n^2 - 1}{2} < \frac{n}{2} \rightarrow 14n - 5 < 4n + 9 \rightarrow 10n < 14 \rightarrow n < \frac{14}{10} = 1.4$$

$4, 9, 9, 4, 0$
 $\begin{matrix} & 4 & 9 & 9 & 4 & 0 \\ & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 3a+b & +3 & +9 & +9 & +4 & +0 \\ & -3 & -9 & -9 & -4 & -0 \end{matrix}$
 $\rightarrow -\frac{3}{r} = a$
 $3x - \frac{3}{r} + b = 3$
 $\rightarrow -\frac{9}{r} + b = 3 \rightarrow b = 3 + \frac{9}{r} \rightarrow b = \frac{10}{r}$

$A = -\frac{3}{r}$
 $B = \frac{10}{r}$
 $\rightarrow 3(-\frac{3}{r}) + 5(\frac{10}{r}) = \frac{44}{r} = \boxed{44}$

$t_n: -4, -4, 0, \dots \rightarrow n^2 - n - 4$
 $a_n: 24, 31, 34, 41, \dots \rightarrow an + 21$
 $n^2 - n - 4 = an + 21 \rightarrow n^2 - 4n - 25 = 0$

$a_n = 5 \times 9 + 21 = 44$
 $t_n = 11 - 9 - 4 = 44$
 این جمله 44 است

$(n-9)(n+3) = 0$
 $\downarrow \quad \downarrow$
 $9 \quad -3$
 خقق
 (از این به بعد با 3 نمی توانه بود)

$-4, 4, -4, 0, \dots$
 $\begin{matrix} & -4 & 4 & -4 & 0 & \dots \\ & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 3a+b & +3 & +4 & +3 & +0 & \dots \\ & -3 & -4 & -3 & -0 & \dots \end{matrix}$
 $\rightarrow a = \frac{r}{r} = 1$
 $3x(1) + b \rightarrow b = -1$

$c = -4 \rightarrow$ صفر