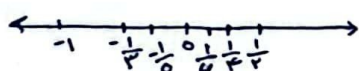


مجموعه $0, 1, 3, 7, 13, 22, \dots$

مجموعه $0, 1, 3, 7, 13, 22, \dots$

مجموعه $(n-1) \times 3$

$t_{11} = (3 \times 11 + 1) + (11-1) \times 3 + (3 \times 11 + 1) = 130$



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

هر n بزرگتر جهت به صفر نزدیک می شود یعنی می توان گفت به صفر میل می کند پس اولین و دومین جمله کوچکترین و بزرگترین هستند.

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

$b_1 = (-3)^1 - 7 \times 1 = -20$

$-5n + 22 = -20 \rightarrow -5n = -42 \rightarrow n = 8.4$

$k = 14$

$10 - 7 = 3 \rightarrow 3d = 12 \rightarrow d = 4$

$9 - 1 = 8 \rightarrow 8d \rightarrow 8 \times 4 = 32$

$\begin{cases} (2a + b = 7) - 1 \\ 3a + b = 10 \\ \hline a = 3 \end{cases} \quad b = -1$

$a_1 = 3 - 1 = 2$

$a_2 = 12 - 1 = 11$

$3, 11, \dots$

$b_n = 8n - 5$

$t_n = \frac{3}{2}n^2 - \frac{1}{2}n$

$t_n = \frac{3n-1}{2n+3}$

$\frac{3n-1}{2n+3} < \frac{3}{2} \rightarrow 2n-1 < 3n+9 \rightarrow 2n < 10 \rightarrow n < 5$

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

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

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

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

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

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

$c = -4 \rightarrow$ صفر