

تکلیف شماره ۱۱ گروه دهم دفتر

« به نظرا »

برای حل کنید

$$1, 5, 12, \dots \quad t_n = n^2 + \frac{n(n-1)}{2} \rightarrow t_1 = 1 + \frac{0}{2} = \boxed{1} \quad (1)$$

$$0, 1, 3, \dots \quad t_n = \frac{n(n-1)}{2} \rightarrow \Delta \Delta = \frac{n(n-1)}{2} \rightarrow n = \boxed{11} \quad \text{پانزدهم} \quad (2)$$

نصفه : $0, 4, 8, 12, \dots$ $t_n = 4n - 4 \rightarrow t_{11} = 44 - 4 = \boxed{40}$ نصفه
 زنبی : $5, 9, 13, \dots$ $a_n = 4n + 1 \rightarrow a_{11} = 44 + 1 = \boxed{45}$ زنبی
 مجموع $\rightarrow \boxed{85}$ (3)

روش دوم : کلی حساب کردن
 $5, 13, 21, \dots$ $t_n = 8n - 3 \rightarrow t_{11} = 8 \times 11 - 3 = \boxed{85}$ (4)

اختلاف $\left. \begin{array}{l} -1, \frac{1}{2}, -\frac{1}{3}, \frac{1}{4}, \dots \\ \text{بزرگترین جمله} = \frac{1}{2} \\ \text{کوچکترین} = -1 \end{array} \right\} \rightarrow \frac{1}{2} - (-1) = \boxed{1,5}$ (5)

$b_n = (-3)^n - 7 \times 3 = -27 - 21 = -48$ $\Delta n + 22 = -48 \rightarrow \Delta n = -70$ (6)
 $\rightarrow n = \frac{70}{8} = 14 \rightarrow k = \boxed{14}$

$1.a + b - 7a - b = 12 \rightarrow a = 4$ $9a + b - a - b = 5a = \boxed{20}$ (7)

$7a + b - 2a - b = 5a - 7 \rightarrow 2a = 11 \rightarrow a = 4 \rightarrow 2a + b = 7$ (8)
 $a_n = 4n - 1 \rightarrow a_1 = 4 - 1 = 3$ $\rightarrow 11 + b = 7 \rightarrow b = -4$
 $a_3 = 4 \times 3 - 1 = 11$
 $b_n : 3, 11, 19, \dots \rightarrow b_n = \boxed{8n - 5}$

$t_n = \frac{4n-2}{2n+3} \rightarrow \frac{4n-2}{2n+3} < \frac{3}{2} \rightarrow 4n-2 < 3n+9 \rightarrow n < 11$ (9)
 $\rightarrow n < 4,5 \rightarrow \boxed{4}$ $\left[\frac{13}{2}\right] = 6$

$4, 9, 9, 9, \dots$ $-\frac{3}{2} + b = 6 \rightarrow b = 7,5$ (10)
 $t_n = -\frac{3}{2}n^2 + 7,5n$
 $3 \times -\frac{3}{2} + 5 \times \frac{15}{2} = \frac{-9 + 75}{2} = \frac{66}{2} = \boxed{33}$
 $a = -\frac{3}{2}$

$$|a+b| - |a| - |b| = |1-1| = 1 \rightarrow \underline{a=0} \quad |a+b| = 1+|b|=1 \rightarrow \underline{b=0} \quad (1)$$

$$\underline{a_n = 0n + 1}$$

$$0 \times 9 + 1 = (99) \quad \text{for } n=99$$

$$\textcircled{9} \quad 9, 18, 27, \dots \quad |9+b|=9 \rightarrow b=0 \quad 11-9-9 = (99)$$

$$\begin{array}{c} \dots \\ + \quad + \quad + \\ \dots \end{array} \quad C=9 \quad \underline{t_n = n^2 - n - 9}$$

$$\begin{array}{c} \dots \\ + \quad + \\ \dots \end{array} \rightarrow a=1$$

$$n^2 - n - 9 = 0n + 1 \rightarrow n^2 - 9n - 10 = 0 \rightarrow (n-10)(n+1) = 0 \rightarrow n = 10 \quad \boxed{n=9}$$

Paya Golmohammadi :)