

نام و نام خانوادگی پارسا ایزدیری پاسخنامه تشریحی تکلیف شماره .../... کلاس ... B ... (نام)

الف) $t_n = 3n^2 - 1 \Rightarrow 2, 11, 26, 47, 74$

ب) $t_n = \frac{2n+1}{n+4} \Rightarrow \frac{3}{5}, \frac{5}{7}, \frac{7}{9}, \frac{9}{11}, \frac{11}{13}$

الف) $t_n = \frac{(-1)^{n+1}}{\sqrt{n+3}} \Rightarrow t_{13} = \frac{-1}{4} = -\frac{1}{4}$

ب) $t_n = 2n - \left[\frac{n}{4}\right] \Rightarrow t_{13} = 26 - 3 = 23$

الف) $t_n = 2n - 10$

$2n - 10 < 0 \Rightarrow 2n < 10 \Rightarrow n < 5$
 $\boxed{1, 2, 3, 4}$

ب) $t_n = n^2 - 12n + 40$

$n^2 - 12n + 40 < 0 \Rightarrow n^2 - 12n < -40$
 $\Rightarrow n < 10$ $\boxed{10 - 1 = 9}$

الف) $t_n = 2n - 17$

$2n - 17 \leq 0 \Rightarrow n \leq 8$ $\boxed{8}$

ب) $n^2 - 12n + 27$

$n^2 - 12n + 27 \leq 0 \Rightarrow n^2 - 12n \leq -27$
 $\Rightarrow n \leq 13$ $\boxed{13}$

$t_4 = 7$

$t_9 = 22 = t_4 + 5d \Rightarrow 5d = 15 \Rightarrow d = 3$

$t_{13} = t_4 - d = 7 - 3 = 4$

الف) $T_n = n^2 - 5n + 2$ $T_1 = -2$
 $T_2 = -3$ $T_3 = -4$ $T_4 = -5$ $T_5 = -6$
 $\Rightarrow n=3 \Rightarrow 9 - 15 + 2 = -4$
 ب) $T_n = n^2 + 5n + 1$ $\Rightarrow n=1 \Rightarrow 1 + 5 + 1 = 7$

$T_n = -2, -3, -4, -5, -6$
 $a_n = n^2 - 5n + 1$
 $\Rightarrow T_{10} = 100 - 50 + 1 = 51$
 $a = \frac{r}{r} = 1$
 $a_n = a \cdot n^r + b \cdot n + c$
 $T_1 = a + b + c = -2$
 $T_2 = 4a + 2b + c = -3$
 $\begin{cases} b + c = -4 \\ 2b + c = -11 \end{cases} \Rightarrow b = -7, c = 3$

$T_n = -4, -3, -2, -1$
 $a = \frac{r}{r} = 1$ $a_n = a \cdot n^r + b \cdot n + c$
 $T_1 = a + b + c = -4$
 $T_2 = 4a + 2b + c = -3$
 $\begin{cases} b + c = -5 \\ 2b + c = 1 \end{cases} \Rightarrow b = -6, c = 1$
 $A_n = n^2 - 6n - 1$

$A = (-\infty, a+1]$, $B = [2a+1, +\infty)$
 $2a+1 = a+1 \Rightarrow a=0$ $A = (-\infty, 1]$, $B = [1, +\infty)$
 $\Rightarrow A \cap B = \{1\}$ $a > 3 \vee a = 3 \Rightarrow a \geq 3$
 $A \cap B = \emptyset$ $a+1 < 2a+1 \Rightarrow 1 < a$

$\frac{99-3}{3} + 1 = 33$ 33 (الف)
 $\frac{100-4}{4} + 1 = 25$ 25 (ب)
 $\frac{90-10}{10} + 1 = 9$ 9 (ج)
 $33 + 25 - 9 = 49$ 49 (د)