

نام و نام خانوادگی پرستیا ایریزدی پاسخنامه تشریحی تکلیف شماره / کلاس B نام B	
الف) $t_n = 3n^2 - 1 \Rightarrow 2, 11, 26, 47, 74$ ✓ ب) $t_n = \frac{2n+1}{n+4} \Rightarrow \frac{3}{5}, \frac{5}{7}, \frac{7}{9}, \frac{9}{11}, \frac{11}{13}$ ✓ (۲)	۱
الف) $t_n = \frac{(-1)^{n+1}}{\sqrt{n+3}} \Rightarrow t_{13} = \frac{-1}{4} = -\frac{1}{4}$ ✓ ب) $t_n = 2n - \left[\frac{n}{4}\right] \Rightarrow t_{13} = 26 - 3 = 23$ ✓ (۲)	۲
الف) $t_n = 2n - 10$ $2n - 10 < 0 \Rightarrow 2n < 10 \Rightarrow n < 5$ ✓ (۱) $\boxed{1, 2, 3, 4}$ $(n-1)(n-4) < 0$ ب) $t_n = n^2 - 12n + 40$ $n^2 - 12n + 40 < 0 \Rightarrow n^2 - 12n < -40$ $\Rightarrow n < 10$ ✓ (۱) $\boxed{10 - 1 = 9}$ $9 < n < 10$ ✓ (۱) $\boxed{10}$	۳
الف) $t_n = 2n - 17$ $2n - 17 \leq 0 \Rightarrow n \leq 8$ ✓ (۱) $(n-9)(n-3) < 0$ ب) $n^2 - 12n + 27$, $n^2 - 12n + 27 \leq 0 \Rightarrow n^2 - 12n \leq -27$ $\Rightarrow n \leq 13$ ✓ (۱) $\boxed{13}$ $3 < n < 9 \Rightarrow 2, 3, 4, 5, 6, 7, 8$ ✓	۴
$t_4 = 7$ $t_9 = 22 = t_4 + 5d \Rightarrow 5d = 15 \Rightarrow d = 3$ $t_{13} = t_4 - d = 7 - 3 = 4$ ✓ (۲)	۵

$$الف) t_n = n^2 - 5n + 7$$

$$t_1 = -3$$

$$t_2 = -5$$

$$t_3 = -7$$

$$t_4 = -5$$

$$t_5 = -3$$

$$\Rightarrow n=3 \Rightarrow 9-11+7 = -1$$

$$ب) t_n = n^2 + 5n + 1$$

$$\Rightarrow n=1 \Rightarrow$$

$$1+5+1=7$$

$$t_n = -3, -5, -7, -5, -3$$

$$a = \frac{1}{r} = 1$$

$$a_n = an^2 + bn + c$$

$$t_1 = a + b + c = -3$$

$$t_2 = 4a + 2b + c = -5$$

$$\begin{cases} b + c = -4 \\ 2b + c = -11 \end{cases} \Rightarrow b = -7, c = 1$$

$$a_n = n^2 - 5n + 1$$

$$\Rightarrow t_{10} = 100 - 50 + 1 = 51$$

$$t_n = -3, -5, -7, -5, -3$$

$$a = \frac{1}{r} = 1 \quad a_n = an^2 + bn + c$$

$$t_1 = a + b + c = -3$$

$$t_2 = 4a + 2b + c = -5$$

$$\begin{cases} t_1 = b + c = -1 \\ t_2 = 2b + c = -9 \end{cases} \Rightarrow b = -1, c = -2$$

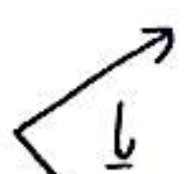
$$a_n = n^2 - n - 2$$

$$A = (-\infty, a+1], B = [2a+1, +\infty)$$

$$2a+1 = a+1 \Rightarrow a=0, A = (-\infty, 1], B = [1, +\infty)$$

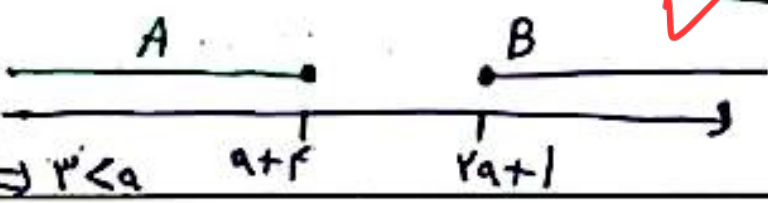
$$\Rightarrow A \cap B = \{1\}$$

$$a > 3 \vee a = 3 \Rightarrow a > 3$$



$$A \cap B = \emptyset$$

$$a+1 < 2a+1 \Rightarrow 1 < a$$



$$\frac{99-3}{3} + 1 = 33$$

$$33 \text{ (الف)}$$

$$\frac{100-5}{5} + 1 = 20$$

$$20 \text{ (ب)}$$

$$\frac{90-10}{10} + 1 = 9$$

$$9 \text{ (ج)}$$

$$33 + 20 - 9 = 44$$