

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

ب) $t_n = \frac{n+1}{n+4} \Rightarrow \frac{3}{5}, \frac{4}{6}, 1, \frac{9}{8}, \frac{11}{9}, \dots$

(۲)

الف) $t_n = \frac{(-1)^n}{\sqrt{n+3}} \Rightarrow t_{13} = \frac{(-1)^{13}}{\sqrt{16}} = -\frac{1}{4}$

ب) $t_n = 2n - \left\lfloor \frac{n}{4} \right\rfloor \Rightarrow t_{14} = 28 - \left\lfloor \frac{14}{4} \right\rfloor = 23$

(۲)

الف) $t_n = 2n - 10 \Rightarrow 2n - 10 < 0 \Rightarrow 2n < 10 \Rightarrow n < 5$

عدد ۴

ب) $t_n = n^2 - 18n + 80 \Rightarrow (n-4)(n-10) < 0 \Rightarrow \frac{4}{+} \frac{10}{-}$

(۲)

عدد ۷

الف) $t_n = 2n - 19 \Rightarrow 2n - 19 \leq 0 \Rightarrow 2n \leq 19 \Rightarrow n \leq 9$

(۲)

عدد ۸

ب) $t_n = n^2 - 12n + 27 \Rightarrow (n-3)(n-9) \leq 0 \Rightarrow \frac{3}{+} \frac{9}{-}$

عدد ۷

$t_5 = 7 \Rightarrow t_1 + 4d = 7$

$t_9 = 22 \Rightarrow t_1 + 8d = 22$

$d = \frac{22-7}{4} = \frac{15}{4} \Rightarrow t_1 = -2$

(۲)

$t_9 = t_1 + 8d = -2 + 15 = 13$

$$\text{a) } t_n = n^r - c_n + r \quad \text{Min}_{-V}^r \Rightarrow y_{\min} = -V$$

ب) $t_n = n^2 + \varepsilon_{n+1}$ $\text{Min} / -1 \rightarrow n$
 $\text{Min} / 9 \Rightarrow y_{\min} = 9 \rightarrow n_{\min} = 1$

$t_n = n^r - g_{n+1} + 1 \Rightarrow t_{10} = 100 - 90 + 1 = \boxed{11}$

$t_n = -9, -1, 1, 21, \dots$
 $c = (-V)$
 $r_a = \varepsilon$
 $a = r$
 $t_n = r_n^r - n - V$ ✓

$$\left. \begin{array}{l} \text{I} \Leftrightarrow b: a + \varepsilon = \gamma a + 1 \Rightarrow a = \gamma \\ \text{II} \Leftrightarrow b: a + \varepsilon < \gamma a + 1 \Rightarrow \gamma < a \end{array} \right\} a \geq \gamma$$

(الف) چند عدد به ۳ بخش نیز
 $n(A) = \frac{99-3}{3} + 1 = 32$
 ب " " " "
 $n(B) = \frac{100-4}{4} + 1 = 25$
 ج " " " "
 $n(A \cap B) = \frac{90-18}{18} + 1 = 6$
 د " " " "
 $n(A \cup B) = n(A) + n(B) - n(A \cap B)$
 $32 + 25 - 6 = 51$