

حل 1) $t_n = 10n^2 - 1 \rightarrow$

$t_1 = 10(1)^2 - 1 = 9$ $t_2 = 10(2)^2 - 1 = 39$ } 9, 11, 14, 27, 42
 $t_3 = 10(3)^2 - 1 = 89$ $t_4 = 10(4)^2 - 1 = 159$
 $t_5 = 10(5)^2 - 1 = 249$

ج 1) $t_n = \frac{10n+1}{n+2} \rightarrow$
 $t_1 = \frac{10(1)+1}{1+2} = \frac{11}{3}$ $t_2 = \frac{10(2)+1}{2+2} = \frac{21}{4}$
 $t_3 = \frac{10(3)+1}{3+2} = \frac{31}{5}$ $t_4 = \frac{10(4)+1}{4+2} = \frac{41}{6}$
 $t_5 = \frac{10(5)+1}{5+2} = \frac{51}{7}$

حل 2) $t_n = \frac{(-1)^n}{\sqrt{n+10}} \rightarrow t_{10} = \frac{(-1)^{10}}{\sqrt{10+10}} = \frac{1}{\sqrt{20}}$

ج 2) $t_n = 10n - \left\lfloor \frac{n}{2} \right\rfloor \Rightarrow t_{10} = 10(10) - \left\lfloor \frac{10}{2} \right\rfloor = 95$

حل 3) $t_n = 2n - 10 \rightarrow 2n - 10 < 0 \rightarrow \frac{2n-10}{2} \rightarrow$ جذ 5 (4, 5, 6, 7)

ج 3) $t_n = n^2 - (2n + 10) \rightarrow t_n = (n-10)(n-2) \rightarrow$ جذ 2 (6, 7, 8, 9, 10)

حل 4) $t_n = 2n - 14 \rightarrow 2n - 14 < 0 \rightarrow \frac{2n-14}{2} \rightarrow$ جذ 7

ج 4) $t_n = n^2 - (2n + 14) \rightarrow t_n = (n-10)(n-4) \rightarrow$ جذ 4 (6, 7, 8, 9, 10)

$t_2 = 27$ } $a = \frac{t_2 - t_1}{2 - 1} = 27 \rightarrow 10(2) + b \rightarrow b = -13 \rightarrow t_n = 10n - 13 \rightarrow t_{10} = 10(10) - 13 = 97$
 $t_1 = 9$

حل 5) $t_n = n^2 - 4n + 4 \xrightarrow{as \rightarrow} \begin{cases} \frac{a}{2} = 2 \\ a - 1n + 4 = -1 \end{cases} \rightarrow \min = -1$

ج 5) $t_n = n^2 + 2n + 1 \xrightarrow{as \rightarrow} \begin{cases} \frac{a}{2} = -1 \\ a - 1n + 1 = -10 \end{cases} \rightarrow -1 \notin \mathbb{N} \rightarrow t_1 = 1 + 2 + 1 = 4 = \min$

⊕ - 2, -7, -10, -15, -20, -25 $\rightarrow a = 1, c = 1 \rightarrow -25 = (1 + b(1)) + 1 \rightarrow b = -25$

$t_n = n^2 - 4n + 1 \rightarrow t_{10} = 21$

$t_{10} = 100 - 40 + 1 = 61$

⊖ - 9, -1, 7, 17 $\rightarrow a = 2, c = -9 = -9 = 2 + b(1) - 9 \rightarrow b = -1$

$t_n = 2n^2 - n - 9$

جاء) $t_n = 10n^2 - 1 \rightarrow$

$t_1 = 10(1)^2 - 1 = 9$ $t_2 = 10(2)^2 - 1 = 39$ } $9, 11, 14, 17, 22$
 $t_3 = 10(3)^2 - 1 = 89$ $t_4 = 10(4)^2 - 1 = 159$
 $t_5 = 10(5)^2 - 1 = 249$

جاء) $t_n = \frac{10n+1}{n+2} \rightarrow$

$t_1 = \frac{10(1)+1}{1+2} = \frac{11}{3}$ $t_2 = \frac{10(2)+1}{2+2} = \frac{21}{4}$
 $t_3 = \frac{10(3)+1}{3+2} = \frac{31}{5}$ $t_4 = \frac{10(4)+1}{4+2} = \frac{41}{6}$
 $t_5 = \frac{10(5)+1}{5+2} = \frac{51}{7}$

جاء) $t_n = \frac{(-1)^n}{\sqrt{n+10}} \rightarrow t_{10} = \frac{(-1)^{10}}{\sqrt{10+10}} = \frac{1}{\sqrt{20}}$

جاء) $t_n = 10n - \left\lfloor \frac{n}{2} \right\rfloor \rightarrow t_{10} = 10(10) - \left\lfloor \frac{10}{2} \right\rfloor = 95$

جاء) $t_n = 10n - 10 \rightarrow 10n - 10 < 0 \rightarrow \frac{10n-10}{10} \rightarrow$ جاء 2 (9, 10, 11, 12)

جاء) $t_n = 10n^2 - (10n + 10) \rightarrow t_n = (10n - 10)(10n - 10) \rightarrow \frac{10n-10}{10} \rightarrow$ جاء 6 (6, 7, 8, 9, 10, 11)

جاء) $t_n = 10n - 10 \rightarrow 10n - 10 < 0 \rightarrow \frac{10n-10}{10} \rightarrow$ جاء 1

جاء) $t_n = 10n^2 - 10n + 10 \rightarrow t_n = (10n - 10)(10n - 10) \rightarrow \frac{10n-10}{10} \rightarrow$ جاء 1

$t_2 = 10$
 $t_4 = 10$ } $a = \frac{10-10}{4-2} = 0 \rightarrow 10(4) + b \rightarrow b = -10 \rightarrow t_n = 10n - 10 \rightarrow t_{10} = 10(10) - 10 = 90$

جاء) $t_n = 10n^2 - 10n + 10 \xrightarrow{as \rightarrow} \begin{cases} \frac{10}{10} = 1 \\ 10 - 10 + 10 = 10 \end{cases} \rightarrow \min = 10$

جاء) $t_n = 10n^2 + 10n + 10 \xrightarrow{as \rightarrow} \begin{cases} \frac{10}{10} = 1 \\ 10 - 10 + 10 = 10 \end{cases} \rightarrow \min = 10$

(+1) - 10, -10, -10, -10, -10 $\rightarrow a = 1, c = 1 \rightarrow -10 = 1 + b(1) + 1 \rightarrow b = -12$

$t_n = 10n^2 - 10n + 10 \rightarrow t_{10} = 10(10) - 10(10) + 10 = 10$

$t_{10} = 10(10) - 10(10) + 10 = 10$

(-10) - 10, -10, -10, -10, -10 $\rightarrow a = 1, c = -10 \rightarrow -10 = 1 + b(1) - 10 \rightarrow b = 1$

$t_n = 10n^2 - 10n - 10$

$$n((c-a, a+\varepsilon] \cap [ra+1, a+d)) \in w \rightarrow ra+1 \geq a+\varepsilon \rightarrow a \leq r$$

- با عنصری یابیم

$$\text{الف) } \frac{99-33}{10} + 1 = 33$$

$$\text{ب) } 8, \langle 8n, 1, \dots \rangle \rightarrow \frac{100-8}{8} + 1 = 12$$

$$\text{ج) } \frac{100-16}{16} + 1 = 7$$

$$\text{د) } \left. \begin{array}{l} 33 \text{ فقط} \rightarrow 33-4=29 \\ 8 \text{ تا } 100 = 100-4=96 \\ 8 \text{ و } 33 \neq 4 \end{array} \right\} 29+17+7=53$$