

الف) $t_n = 3n^2 - 1$

$t_1 = 3 \times 1 - 1 = (2)$ $t_2 = 3 \times 4 - 1 = (11)$ $t_3 = 3 \times 9 - 1 = (26)$ $t_4 = 3 \times 16 - 1 = (47)$
 $t_5 = 3 \times 25 - 1 = (74)$

ب) $t_n = \frac{n+1}{n+2}$

$t_1 = \frac{1+1}{1+2} = (\frac{2}{3})$ $t_2 = \frac{2+1}{2+2} = (\frac{3}{4})$ $t_3 = \frac{3+1}{3+2} = (\frac{4}{5})$ $t_4 = \frac{4+1}{4+2} = (\frac{5}{6})$
 $t_5 = \frac{5+1}{5+2} = (\frac{6}{7})$

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

ب) $t_n = 2n - \left[\frac{n}{\frac{1}{2}} \right] = 24 - 11 = (13)$

الف) $t_n = 2n - 10$

$2n - 10 < 0$
 $2n < 10$
 $n < 5$

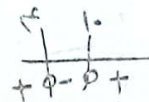
(14)

19 29 39 49

از اول می بینیم که چون بزرگتر مساوی 5 نیست

ب) $t_n = n^2 - 14n + 4$

$n^2 - 14n + 4 < 0$



$(n-1)(n-13)$

(15)

59 69 79 89 99

الف) $t_n = 2n - 14$

$2n - 14 \leq 0$
 $2n \leq 14$
 $n \leq 7$

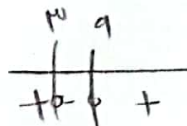
(16)

وقتی برگشت نامت مساوی منفر

ب) $t_n = n^2 - 12n + 27$

$n^2 - 12n + 27 \leq 0$

$(n-3)(n-9)$



(17)

$t_9 = t_3 + ad$

$ad = 10$
 $d = 10$

$t_9 = 9 + 10 \times 8$
 99

$t_{10} = 10 + 10 \times 9$
 100

$t_{11} = 11$

$$d) t_n = n^2 - 4n + 4 \xrightarrow{+V} n^2 - 4n + 4 - V = (n-2)^2 - V$$

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$$n=2$$

$$t_{min} = -V$$

$$b) t_n = n^2 + 4n + 4 \quad (n+2)^2 - 4 \quad t_{min} = -4$$

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$$\begin{array}{ccccccc} -9 & - & 1 & - & 9 & - & 9 \\ \hline -9 & - & 1 & + & 1 & + & 9 \\ \hline & & -4 & & -4 & & -4 \end{array}$$

$$ax^2 + bx + c$$

$$a=1$$

$$c=9$$

$$b=?$$

$$1 \pm b + 9 = -9$$

$$\downarrow$$

$$100 - 90 + 1 = \textcircled{11}$$

$$\begin{array}{ccccccc} -9 & - & 1 & - & 9 & - & 9 \\ \hline + & 9 & + & 9 & + & 9 \\ \hline & & + & 9 & + & 9 \end{array}$$

$$a=9$$

$$c=-9$$

$$b=?$$

$$\downarrow$$

$$-1$$

$$ax^2 = ax^2 + bx + c$$

$$ax = 9x^2 - 9x - 9$$

$$ax^2 + bx + c$$

$$x + b - 9 = -9$$

$$-9$$

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$$2a+1 \geq a+9$$

$$2a-a \geq 8-1$$

$$a \geq 7$$

$$[7, +\infty)$$

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$$\frac{99-11}{11} + 1 = \textcircled{10} \quad \text{الف)}$$

$$\frac{100-10}{10} + 1 = \textcircled{11} \quad \text{ب)}$$

$$\frac{90-10}{18} = \textcircled{4} \quad \text{ج)}$$

$$\frac{100-10}{10} - \frac{10}{10} = \textcircled{9} \quad \text{د)}$$

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