

Date:

Sub:

19, ω

شماره سری

الف) $t_n = 4n^2 - 1$ $n=1 \rightarrow 3$, $n=2 \rightarrow 11$, $n=3 \rightarrow 29$, $n=4 \rightarrow 47$, $n=5 \rightarrow 67$, ... 1

ب) $t_n = \frac{4n+1}{n+4}$ $n=1 \rightarrow \frac{5}{5}$, $n=2 \rightarrow \frac{9}{6}$, $n=3 \rightarrow 1$, $n=4 \rightarrow \frac{17}{8}$, $n=5 \rightarrow \frac{21}{9}$, ...

الف) $t_n = \frac{(-1)^n}{\sqrt{n+4}}$ $t_{14} = \frac{(-1)^{14}}{\sqrt{14+4}} = \frac{-1}{\sqrt{14}} = \frac{-1}{\sqrt{14}}$

ب) $t_n = t_n \left[\frac{n}{4} \right]$ $t_{14} = 2 \times 12 \left[\frac{14}{4} \right] = 24 \times 3 = 72$

الف) $t_n = t_{n-1} \cdot \frac{1}{-1+}$ $\frac{1}{[1, 4]}$

ب) $t_n = n^2 - 14n + 4$ $\frac{4 \cdot 1}{+ 4 - 4 +}$ $\frac{1}{(4, 1)}$

الف) $t_n = t_{n-1} \cdot \frac{1}{-1+}$ $\frac{1}{[1, 1]}$

ب) $t_n = n^2 - 14n + 4$ $\frac{4 \cdot 9}{+ 9 - 4 +}$ $\frac{1}{[4, 9]}$

$t_5 = a + 4d = 1$ $4d = 1 - a$

$t_9 = a + 8d = 22$ $d = 3$ $a = -11$

$t_8 = a + 7d = -11 + 7 \cdot 3 = 10$

Date:

Sub:

الف) $t_n = n^2 - 4n + 2$ ب) $t_n = n^2 + 5n + 1$

$\left\{ \begin{array}{l} \frac{-b}{2a} = \frac{4}{2} = 2 \\ 4 - 11 + 2 = -5 \end{array} \right.$ $\left\{ \begin{array}{l} \frac{-b}{2a} = \frac{-5}{2} = -2.5 \\ 4 - 11 + 2 = -5 \end{array} \right.$

کتابی (۷) کتابی (۲)

نشان دهید که این دنباله حسابی است

$t_n = an^2 + bn + c$

$t_1 = 1 + b + c = -5$

$t_2 = 4 + 2b + c = -7$

$-b + c = -6$ $b = -9$ $t_1 = 1^2 + (-9 \times 1) + 1 = -7$ $a = 1$

$2b + c = -11$ $c = 1$ $t_1 = 1^2 - 9 + 1 = -7$

$t_n = -9, -1, 1, 5, \dots$ $t_n = n^2 - 9n + 1$ $a = 1$

$t_1 = 1 + b + c = -9$ $-b + c = 1$

$t_2 = 4 + 2b + c = -1$ $2b + c = -5$

$b = -1$ $c = -7$

$t_n = n^2 - 9n + 1$

$(-\infty, a+1] \cap [a+1, +\infty)$

$a+1 \geq a+1$

$a \geq 1$

$a \geq 1 = [1, +\infty)$

نشان دهید که این مجموعه تهی است

$\left[\frac{100}{1} \right] = 100$ $\left[\frac{100}{2} \right] = 50$

$\left[\frac{100}{3} \right] = 33$ $\left[\frac{100}{4} \right] = 25$

$\left[\frac{100}{5} \right] = 20$ $\left[\frac{100}{6} \right] = 16$

$\left[\frac{100}{7} \right] = 14$ $\left[\frac{100}{8} \right] = 12$

$\left[\frac{100}{9} \right] = 11$ $\left[\frac{100}{10} \right] = 10$

$n(A \cup B) = n(A) + n(B) - n(A \cap B)$

$= 55 + 20 - 9 = 66$