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کتاب مسری

الف) $t_n = 2n^2 - 1$ $n=1 \rightarrow 1$, $n=2 \rightarrow 11$, $n=3 \rightarrow 29$, $n=4 \rightarrow 47$, $n=5 \rightarrow 65$, ...

ب) $t_n = \frac{2n+1}{n+5}$ $n=1 \rightarrow \frac{3}{6}$, $n=2 \rightarrow \frac{5}{7}$, $n=3 \rightarrow \frac{7}{8}$, $n=4 \rightarrow \frac{9}{9}$, $n=5 \rightarrow \frac{11}{10}$, ...

الف) $t_n = \frac{(-1)^n}{\sqrt{n+2}}$ $t_{14} = \frac{(-1)^{14}}{\sqrt{14+2}} = \frac{1}{\sqrt{16}} = \frac{1}{4}$

ب) $t_n = t_n \left[\frac{n}{5} \right]$ $t_{14} = 2 \times 12 \left[\frac{14}{5} \right] = 24 \times 3 = 72$

الف) $t_n = t_{n-1} \cdot \frac{1}{-1+}$ $\frac{1}{[1, \infty)}$ No

ب) $t_n = n^2 - 15n + 5$ $\frac{1}{+1-1+}$ $\frac{1}{(5, 10)}$ No

الف) $t_n = t_{n-1} - 1$ $\frac{1}{-1+}$ $\frac{1}{[1, 1]}$ No

ب) $t_n = n^2 - 15n + 24$ $\frac{1}{+1-1+}$ $\frac{1}{[4, 9]}$ No

$t_5 = a + 4d = 1$ $ad = 10$

$t_9 = a + 8d = 22$ $d = 3$ $a = -5$

$t_8 = a + 7d = -5 + 7 \times 3 = 16$

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

$\begin{cases} \frac{-b}{2a} = \frac{4}{2} = 2 \\ 4 - 11 + 5 = -2 \end{cases}$ $\begin{cases} \frac{-b}{2a} = \frac{-5}{2} = -2.5 \\ 5 - 11 + 1 = -5 \end{cases}$

لایحه منبری لایحه منبری

$t_n = an^2 + bn + c$ $t_n = -5, -1, 1, 5, \dots$

$t_1 = 1 + b + c = -5$ $t_2 = 4 + 2b + c = -1$

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

$2b + c = -11$ $c = 1$ $t_1 = 1 + (-9 \times 1) + 1 = -7$

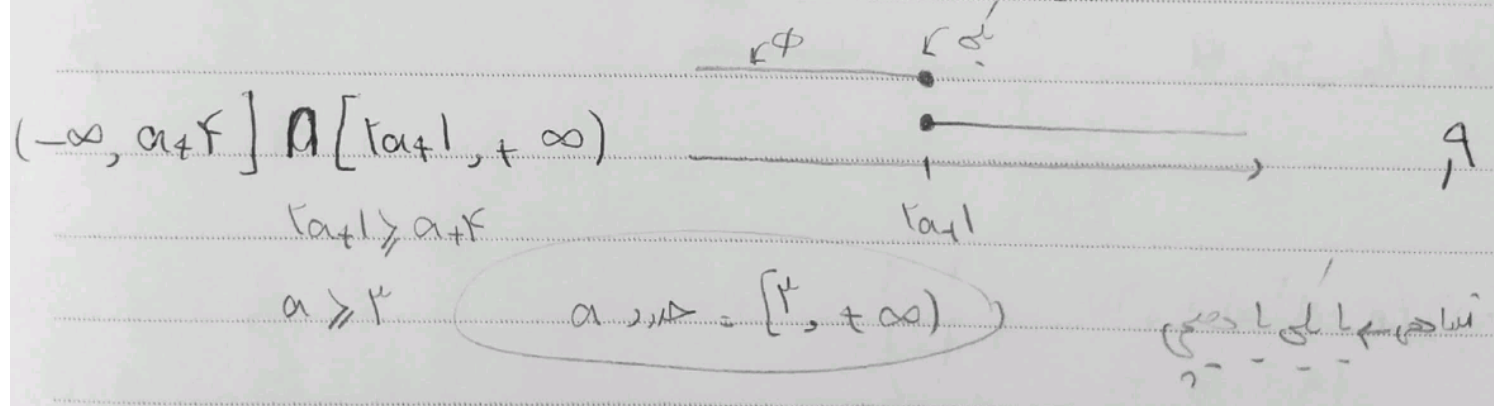
$t_n = -9, -1, 1, 5, \dots$ $t_n = 5, a = 2$

$t_1 = 1 + b + c = -9$ $-b + c = 10$

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

$b = -1$ $c = -10$

$t_n = n^2 - n - 10$



$\left[\frac{100}{2} \right] = 50$ $\left[\frac{100}{3} \right] = 33$

$\left[\frac{100}{4} \right] = 25$ $\left[\frac{100}{5} \right] = 20$

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

$= 50 + 33 - 20 = 63$