

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

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

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

ب) $t_n = 2(13) - \left[\frac{13}{4}\right] \Rightarrow 26 - 3 = 23$
 $\left[\frac{13}{4}\right] = 3/25 \approx 3$

الف) $t_n = 2n - 10 < 0 \rightarrow 2n < 10 \rightarrow n < 5 \rightarrow 4$

ب) $t_n = n^2 - 14n + 50 < 0 \rightarrow (n-7)(n-10) < 0 \rightarrow \frac{0}{7} \rightarrow \frac{0}{10} \rightarrow$

$7 < n < 10 \rightarrow$ جمله ۸

الف) $t_n = 2n - 16 < 0 \rightarrow \frac{0}{8} \rightarrow \frac{0}{16} \rightarrow \frac{16-1}{1} + 1 = 16$ جمله ۸ $2n \leq 16$
 $n \leq 8$

ب) $n^2 - 12n + 27 = (n-3)(n-9) < 0 \rightarrow \frac{0}{3} \rightarrow \frac{0}{9} \rightarrow \frac{9-3}{1} + 1 = 6+1=7$

$t_n = a_1 + (n-1)d \rightarrow ① + 4 = a_1 + (4-1)d = 7 \rightarrow a_1 + 3d = 7$
 $a_1 + (3)(3) = 7 \quad ② + 9 = a_1 + (9-1)d = 22 \rightarrow a_1 + 8d = 22$
 $a_1 + 9 = 7 \rightarrow \boxed{a_1 = -2}$
 $-5d = -15 \rightarrow d = 3$

$t_3 = a_1(3-1)d \rightarrow +3 = -2(2)3 = +4$

$d = 3$ پس $\frac{15}{3} = 5$ به عبارتی $22-7=15$ تا ۵ = ۴-۹ جمله ۵

الف) $t_n = n^2 - 6n + 2 \rightarrow a > 0$ نمودار سهمی $\uparrow$ منبسط
 $\rightarrow$ $n = \frac{-b}{2a} = \frac{+6}{2} = 3$ $\rightarrow$ $n = 3$ $\rightarrow$ $n = 3$ $\rightarrow$ $n = 3$

$n^2 - 6(3) + 2 = -7$

ب) $t_n = n^2 + 4n + 1 \rightarrow a > 0$ نمودار سهمی $\uparrow$ منبسط
 $\rightarrow$ $n = \frac{-b}{2a} = \frac{-4}{2} = -2$ $\rightarrow$ $n = -2$ $\rightarrow$ $n = -2$ $\rightarrow$ $n = -2$

$a_1 = 6$ $a_2 = 13$ $a_3 = 22$ $\rightarrow$ $t_n = (1)^2 + 4(1) + 1 \rightarrow 6$ $\rightarrow$ $n = 1$ $\rightarrow$ $n = 1$ $\rightarrow$ $n = 1$

$t_n = -4, -7, -10, -13, -16, \dots$

$\rightarrow 2a = 2 \rightarrow a = 1 \rightarrow an^2 + bn + c$

$d_1 = -4 \rightarrow a_1 = 1x(1)^2 + b(1) + c = -4 \rightarrow -b + c = -5$
 $a_2 = -7 \rightarrow a_2 = 1x(2)^2 + b(2) + c = -7 \rightarrow 2b + c = -7$

$$f_0 = an^2 + bn + c$$

$$1 \times (10^2) + (-6)10 + 1 = 100 + -60 + 1 = 41$$

۱. با چه سوال ۷ =

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$$f_n = -69 - 161, 21, \dots$$

$$\begin{matrix} \xrightarrow{+9} & \xrightarrow{+13} \\ \xrightarrow{+9} & \xrightarrow{+13} \end{matrix}$$

$$\rightarrow 2a = 4 \rightarrow a = 2 \rightarrow an^2 + bn + c$$

$$a_1 = 2(1)^2 + b(1) + c = -6$$

$$\rightarrow b + c = -8 \rightarrow -b - c = +8$$

$$a_2 = 2(2)^2 + b(2) + c = -1$$

$$\rightarrow 2b + c = -9$$

$$f_n = 2n^2 + -1n + -7$$

$$\boxed{+b = -1}$$

$$\rightarrow \boxed{c = -7}$$

$$f_n = 2n^2 - 1n - 7$$

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بازها ها معموره نامتفاهی مستقر مگر که: اشتراک تهی یا تک عتوی باشد. ینس

$$a + 4 \leq 2a + 1$$

$$a - 2a \leq -4 + 1$$

$$-a \leq -3 \rightarrow a \geq +3$$

$$a \in [3, +\infty) \leftarrow \text{مقدار } a$$

۵-۱۰



$$33 = \left[\frac{99}{3} \right] \leq \frac{99-3}{3} + 1 = 33 \quad \text{(الف)}$$

$$19 = \left[\frac{99}{5} \right] \leq \frac{99-5}{5} + 1 = 19 \quad \text{(ب)}$$

$$✓ \quad 4 = \frac{99-15}{15} + 1 \leq \left[\frac{99}{15} \right] \leftarrow \text{اشتراک ۱۵}$$

$$19 + 33 = 52 \leftarrow \text{اجتماع الف و ب} \quad 52 - 6 = 46$$