

دہم، مضامین

الف، $3(1)^2 - 1 = 2$ $3(4)^2 - 1 = 47$
 $3(2)^2 - 1 = 11$ $3(5)^2 - 1 = 74$
 $3(3)^2 - 1 = 22$ $2, 11, 22, 47, 74, \dots$

ب) $\frac{3(1)+1}{1+4} = \frac{4}{5}$ $\frac{3(2)+1}{2+4} = \frac{7}{6}$ (1)
 $\frac{3(3)+1}{3+4} = \frac{10}{7}$ $\frac{3(4)+1}{4+4} = \frac{13}{8}$
 $\frac{3(5)+1}{5+4} = \frac{16}{9}$ $\frac{4}{5}, \frac{7}{6}, 1, \frac{10}{7}, \frac{13}{8}$

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

ب، $3(13) - \left[\frac{13}{4}\right] = 39 - 3 = 36$ (2)

الف، $n = 1, 2, 3, 4 \rightarrow$ جملہ 4
 منفی نمی شود

ب $(n-10)(n-4)$
 $n = 5, 6, 7, 8, 9 \rightarrow$ جملہ 5
 منفی نمی شود

الف $n = 1, 2, 3, 4, 5, 6, 7, 8 \rightarrow$ جملہ 8
 ناممکن می شود

ب $(n-3)(n-9)$
 $n = 4, 5, 6, 7, 8, 9 \rightarrow$ جملہ 6

$\frac{a_m - a_n}{m - n} = d$ $\frac{22 - 2}{9 - 1} = \frac{20}{8} = 2.5 = d$

$3(f) + b = 7 \rightarrow b = 4$
 $t_n = 3n - 4$ $t_p = 3(3) - 4 = 5$ (3)

الف، $h_{min} = -\frac{b}{2a} = -\frac{-4}{2(1)} = \frac{4}{2} = 2 = n$ $a_{min} = (3)^2 - 4(3) + 2 = -1$ (4)

ب، $h_{min} = -\frac{b}{2a} = -\frac{-4}{2(1)} = 2$ $a_{min} = (-2)^2 + 4(-2) + 1 = -3$

$-4, -1, 1, 4, 9, \dots$
 $\begin{matrix} -4 & -1 & 1 & 4 & 9 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ -2 & -1 & 1 & 2 & 3 \end{matrix}$

$a + b + c = -4 \rightarrow 1 - 4 + c = -4 \rightarrow c = -1$
 $2a + b = -3 \rightarrow 2 + b = -3 \rightarrow b = -5$
 $3a = 2 \rightarrow a = \frac{2}{3}$ (5)

$an^2 + bn + c \rightarrow n^2 - 8n + 1$ $t_{10} = (10)^2 - 4(10) - 1 = 49$

$-4, -1, 1, 4, 9, \dots$
 $\begin{matrix} -4 & -1 & 1 & 4 & 9 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ 2 & 1 & 0 & 1 & 2 \end{matrix}$

$a + b + c = -4$ $2 - 1 + c = -4 \rightarrow c = -5$
 $3a + b = 4$ $3(2) + b = 4 \rightarrow b = -2$
 $4a = 4 \rightarrow a = 1$ (6)

$an^2 + bn + c \rightarrow a_n = 2n^2 - n - 5$

$\left[\frac{100}{15}\right] = 6$ ج

$\left[\frac{100}{3}\right] = 33$ الف (10)

$2a + 1 \geq a + 4$ (9)

$33 + 20 - 4 = 49$ د

$\left[\frac{100}{5}\right] = 20$ ب

$a \geq 3$