

$$1, 1, 1, \dots$$

$$= 1, 11, 26, 47, 73$$

$$\frac{1}{9}, \frac{4}{8}, \frac{9}{7}, \frac{16}{6}, \frac{25}{5}, \dots \Rightarrow \frac{1}{9}, \frac{4}{8}, \frac{9}{7}, \frac{16}{6}, \frac{25}{5}, \dots$$

$$\frac{(-1)^{13}}{\sqrt{13+13}} = \frac{-1}{\sqrt{26}} = -\frac{1}{\sqrt{26}}$$

$$2(13) - \left[ \frac{13}{\sqrt{26}} \right] = 26 - 3 = 23$$

$$2n-1 < 0 \Rightarrow n < 0.5 \Rightarrow n = 0$$

$$(n-1)(n-4) = 0 \Rightarrow n = 1, 4 \Rightarrow n = 1, 4$$

$$2n-1 \leq 0 \Rightarrow n \leq 0.5 \Rightarrow n = 0$$

$$(n-3)(n-9) = 0 \Rightarrow n = 3, 9 \Rightarrow n = 3, 9$$

$$\begin{cases} -x + 2a + b = -1 \\ 9a + b = 22 \end{cases} \Rightarrow \begin{cases} a = 1 \\ b = -1 \end{cases}$$

$$\Rightarrow t_n = 3n - 1 \Rightarrow t_3 = 9 - 1 = 8$$

$$\text{الف)} \frac{-b}{2a} = \frac{9}{2} = 4.5 \Rightarrow 3^2 - 11 + 2 = \boxed{-V} = t_n$$

$$t_n = -V$$

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$$\text{ب)} \frac{-b}{2a} = \frac{-14}{2} = -7 \Rightarrow (-7)^2 - 11 + 1 = \boxed{-3}$$

در صورت درست است که مثل به جبهه منقض هم درست باشد.

$$\begin{aligned} & -14, -V, -11, -V, -14, \dots \quad An^2 + Bn + C \\ & \begin{array}{c} \text{Diagram showing terms and differences:} \\ -14 \quad -V \quad -11 \quad -V \quad -14 \\ \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \\ -1 \quad +1 \quad +3 \quad +5 \\ \uparrow \quad \uparrow \quad \uparrow \\ +2 \quad +2 \quad +2 \end{array} \quad \begin{array}{l} 1n^2 - 2n - 3 \Rightarrow t_n = 1, -2, -3, \dots \\ \Rightarrow A=1 \Rightarrow \begin{cases} -14 + B + C = -14 \\ 1 + 2B + C = -V \end{cases} \end{array} \\ & \Rightarrow \begin{cases} 3 + 3B = -3 \\ B = -2 \\ C = -3 \end{cases} \end{aligned}$$

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$$\begin{aligned} & -4, -1, 1, 2, 1 \quad An^2 + Bn + C \Rightarrow t_n = 2n^2 - n - V \\ & \begin{array}{c} \text{Diagram showing terms and differences:} \\ -4 \quad -1 \quad 1 \quad 2 \quad 1 \\ \uparrow \quad \uparrow \quad \uparrow \quad \uparrow \\ +3 \quad +4 \quad +3 \quad +2 \\ \uparrow \quad \uparrow \\ +2 \quad +2 \end{array} \quad \begin{array}{l} \Rightarrow A=2 \Rightarrow \begin{cases} -4 + B + C = -4 \\ 1 + 2B + C = -1 \end{cases} \\ \Rightarrow \begin{cases} 4 + B = 0 \Rightarrow B = -4 \\ C = -1 \end{cases} \end{array} \end{aligned}$$

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$$a + 2 \leq 2a + 1 \Rightarrow 3 \leq a$$

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$$n = \left[ \frac{100}{100} \right] \rightarrow \text{الف)} 3$$

$$n = \left[ \frac{100}{50} \right] \rightarrow \text{ب)} 2$$

$$n = \left[ \frac{100}{15} \right] \rightarrow \text{ج)} 6$$

$$n(A \cup B) = n(A) + n(B) - n(A \cap B) = 33 + 2 - 9 = 26 \rightarrow \text{د)} 26$$

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