

19/22

نام و نام خانوادگی: پریم محمدی زاده پاسخنامه تشریحی تکلیف شماره کلاس 10.A

$$t_n = 5, 9, 13, 17, \dots$$

$\begin{matrix} \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \end{matrix}$
 $\begin{matrix} & +4 & +4 & +4 \\ & +4 & +4 & +4 \end{matrix}$

$$d = 4 \Rightarrow t_n, t_{n+1}$$

الف) ←

✓

$$t_n = 4(10) + 1 = 41 \quad \text{ب)}$$

$$t_n = 9, 10, 16, 18, \dots$$

$\begin{matrix} \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \end{matrix}$
 $\begin{matrix} & +1 & +7 & +2 \\ & +1 & +7 & +2 \end{matrix}$

$$S_{10} = \frac{10}{2} (12 + 9d) = 120 \quad \text{الف) ←}$$

$\begin{matrix} 12 & 9d \\ 12 & 9d \\ 12 & 9d \\ 12 & 9d \\ 12 & 9d \\ 12 & 9d \\ 12 & 9d \\ 12 & 9d \\ 12 & 9d \\ 12 & 9d \end{matrix}$

✓

$$t_n, t_{n+1}$$

$$t_{10}, t_{11}, t_{12}, t_{13} \Rightarrow$$

$$t_{10} = 6 \times 19 + 1 = 115 \Rightarrow t_{10} = 115$$

$$S_4 = \frac{4}{2} (234 + 2 \times 4) = 494 \quad \text{ب) ←}$$

$$1 + \sqrt{3}, 2, 3 - \sqrt{3}, \dots \Rightarrow d = 1 - \sqrt{3}$$

$\begin{matrix} \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \end{matrix}$
 $\begin{matrix} & +1-\sqrt{3} & +1-\sqrt{3} & +1-\sqrt{3} \end{matrix}$

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$$t_{10} - t_{13} = (a_1 + 9d) - (a_1 + 12d)$$

$$d = \frac{26 - 22}{3} = \frac{4}{3} \Rightarrow 2 - 2\sqrt{3}$$

$$a_n = 2^n, 3 \times 2^n, 2^9 \rightarrow a \times a^m = a^9 \rightarrow y, n+1$$

$\begin{matrix} \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \end{matrix}$
 $\begin{matrix} & +2 \times 2^n & +2 \times 2^n & +2 \times 2^n \end{matrix}$

✓

$$b_n = 2, 4, 8, \dots$$

$\begin{matrix} \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \end{matrix}$
 $\begin{matrix} & +2^{n-1} & +2^{n-1} & +2^{n-1} \end{matrix}$

$$2 - (2n - 1) = n$$

$$\frac{2n - 3}{n - 1} \rightarrow y = 2 + 1 = 3$$

$$2n - 1, 2n - 1, 4n, 4n + 1 \Rightarrow$$

$\begin{matrix} \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \\ \text{ } & \text{ } & \text{ } & \text{ } \end{matrix}$
 $\begin{matrix} & +2^{n-1} & +2^{n-1} & +2^{n-1} \end{matrix}$

$$t_4 = 4n + 3 = 4 \times 1 + 3 = 7$$

✓

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~~$$a_n = r_1 d_1 v_1 \dots \rightarrow a_{n+1} = r_{n+1} d_{n+1} v_{n+1} \dots$$~~

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$$r_{n+1} = c_1$$

$$1, 1, \omega$$

$$b_n = r_1 d_1 v_1 \dots \rightarrow b_{n+1} = r_{n+1} d_{n+1} v_{n+1} \dots$$

$$c_n = r_1 d_1 v_1 \dots \rightarrow c_{n+1} = r_{n+1} d_{n+1} v_{n+1} \dots$$

$$a_n + a_r + a_p = r_1 \rightarrow r_{n+1} + r_d = r_1 \Rightarrow r_{n+1} + r_d - r_{n+1} + r_d = r_1 - r_1$$

$$a_1 + a_r + a_d = 10d$$

$$\frac{a_r - a_r + a_1}{a_1} = \frac{r_1 + r_d - r_1 - d + a_1}{a_1} = \frac{-r_1 + r_d}{-r_1} = \frac{1}{r_1}$$

$$S_r = 10 = \frac{r_1}{r_1} (a + a_r) = 10 \rightarrow a_1 + a_r + r_d = 10$$

$$a_r + a_d = r_d$$

$$r_1 a + r_d = r_d \rightarrow a_1 = d + 9d = 10d$$

$$r_1 (10 - d) + r_d = r_d \rightarrow d = 10 \rightarrow a = 10 - r_1$$

$$S_9 = 9 S_r \quad \frac{a_r}{a_v} = \frac{a + 19d}{a + 4d} = \frac{a + r_1 a}{a + 19a} = \frac{r_1 a}{19a} = \frac{r_1}{19}$$

$$S_9 = \frac{9}{r_1} (r_1 a + r_d) = 9 \times \frac{r_1}{r_1} (r_1 a + r_d)$$

$$9a + r_1 d = r_1 a + r_d \rightarrow 19a = 9d \rightarrow d = 19a$$

$$a_1 = 11$$

$$a_v = r_1 d + a_1 + 4d \rightarrow a_1 = r_1$$

$$a_r = a_1 + r_d = 11 + r_1 = r_1 + r_d \rightarrow a_r = -a$$

$$d_r = \frac{b-a}{n+1} \rightarrow -a = \frac{4r_1 - r_1}{n+1} \rightarrow -2n - a = 19 - r_1$$