

نام و نام خانوادگی نام پدر پاسخنامه تشریحی تکلیف شماره ... کلاس A

$t_n = 5, 9, 13, 17, \dots$ $a) \quad 9 - 5 = 4 = d \Rightarrow t_n = 4n + 1$ $b) \quad t_{10} = \frac{4(10)}{1} + 1 = 41$	۱
$t_n = 4, 10, 16, 22, \dots \Rightarrow d = 6 \Rightarrow t_n = 6n + 2 \Rightarrow t_{10} = 6(10) + 2 = 62$ $a) \quad S_{10} = \frac{10}{2} (4 + 62) = 5(66) = 330$ $b) \quad A(6) = 32 \Rightarrow t_{r1}, t_{r2}, t_{r3}, t_{r4} \Rightarrow t_{r1} = 6(1) + 2 = 8, t_{r2} = 6(2) + 2 = 14$ $S_r = \frac{r}{2} (14 + 8) = r(11) = 66 \Rightarrow r = 6$	۲
$a_n = 1 + \sqrt{r}, r, r - \sqrt{r}, \dots$ $d = r - (1 + \sqrt{r}) = r - 1 - \sqrt{r} = 1 - \sqrt{r} \Rightarrow ar - ar = r - \sqrt{r} - r + 1 - \sqrt{r}$ $t_{ra} - t_{rr} = \frac{a + r + d}{-a_1 - r + d} = rd = r(1 - \sqrt{r}) = r - r\sqrt{r}$	۳
$a_n = 5^{rx}, r \times 5^{rx}, 5^y \Rightarrow d = \frac{r \times 5^{rx} - 5^{rx}}{ar - a_1} = 5^{rx} (r - 1) = 5^{rx} \Rightarrow \begin{cases} d = ar - ar = 5^y - r \times 5^{rx} = 5^{rx} (5^{y-rx} - r) = 5^{rx} \times r \end{cases}$ $5^{y-rx} - r = r \Rightarrow 5^{y-rx} = 2r \Rightarrow y - rx = 1 \Rightarrow y = rx + 1$ $b_n = x, r, y \Rightarrow d = ar - a_1 = r - x \Rightarrow \begin{cases} d = ar - ar = y - r \end{cases} \Rightarrow r - x = y - r \Rightarrow y = 2r - x$ $r - x = rx + 1 - r \Rightarrow rx = r \Rightarrow \begin{cases} x = 1 \\ y = r \end{cases}$ $xy = 1 \times r = r$	۴
$a_n = rx - 4, rx - 1, rx, \dots \Rightarrow a_6 = ?$ $d = ar - a_1 = rx - 1 - (rx - 4) = rx - 1 - rx + 4 = 3$ $4x - rx + 1 = r \Rightarrow rx = r \Rightarrow x = 1$ $a_n = rx - 4 \Rightarrow a_6 = \frac{r(6)}{1} - 4 = 4$	۵

$$a_n = r, \omega, v, \dots \Rightarrow d = r \Rightarrow a_n = r_{n+1} \quad , \quad b_n = r, \omega, \lambda, \dots \Rightarrow d = r \Rightarrow b_n = r_{n-1}$$

$$\text{فرض: } \omega, 11, 1v, \dots \Rightarrow \{ \text{مقدار } = 4n-1 \} \quad a_{r_0} = r(r_0) + 1 = 11 \Rightarrow b_{r_0} = r(r_0) - 1 = 9$$

$$4n-1 \leq 11 \Rightarrow 4n \leq 12 \Rightarrow n \leq 3 \Rightarrow \text{فرض } n=1, 2, 3$$

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6

$$a_1 + a_r + a_r = r_1 \Rightarrow a_r - d + a_r + a_r + d = r_1 \Rightarrow 3a_r = r_1 \Rightarrow a_r = v$$

$$a_1 + a_r + a_\omega = r_\omega \Rightarrow a_r - d + a_r + a_r + d = r_\omega \Rightarrow 3a_r = r_\omega \Rightarrow a_r = r_\omega$$

$$\left. \begin{array}{l} (a_1 + d = v) - \\ - a - d = -v \\ a_1 + r d = r_\omega \\ d = r_\omega, a_1 = -r_1 \end{array} \right\}$$

$$\frac{a_r - a_r + a_1}{a_1} = \frac{(r_\omega - v) - r_1}{-r_1} = \frac{v}{-r_1} = \frac{-1}{r_1}$$

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$$a_1 + a_r + a_r = r_1 \Rightarrow a_r - d + a_r + a_r + d = r_1 \Rightarrow 3a_r = r_1 \Rightarrow a_r = \omega$$

$$a_r + a_\omega = r_\omega \Rightarrow a_r + d + a_r + r d = r_\omega \Rightarrow \frac{r a_r}{r(a)} + \omega d = r_\omega \Rightarrow 1 + \omega d = r_\omega \Rightarrow \omega d = r_\omega - 1 \Rightarrow d = r_\omega - 1 \Rightarrow d = r$$

$$a_1 + d = \omega \Rightarrow a_1 = r \Rightarrow a_n = r + (n-1)r = r_n - 1 \Rightarrow r_n - 1 = a_n$$

$$a_{10} = \frac{r(10) - 1}{r} = \frac{r9}{r}$$

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$$S_9 = 9 S_r \quad , \quad \frac{a_r}{a_v} = ?$$

$$S_r = a_1 + a_r + a_r = a_r - d + a_r + a_r + d = 3a_r$$

$$S_9 = a_1 + a_r + \dots + a_9 = a_\omega - d + a_\omega - r d + \dots + a_\omega + d = 9a_\omega$$

$$S_9 = 9 S_r \Rightarrow 9a_\omega = 9(3a_r) \Rightarrow \frac{9a_\omega}{9} = \frac{9 \cdot 3a_r}{9} \Rightarrow a_\omega = 3a_r$$

$$\hookrightarrow a_r + r d$$

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9

$$a_r + r d = 3a_r \Rightarrow 3a_r = r d \Rightarrow d = \frac{3a_r}{r}$$

$$\frac{a_r}{a_v} = \frac{a_r + \omega d}{a_r + \omega d} = \frac{a_r + \omega \left(\frac{3}{r} a_r \right)}{a_r + \omega \left(\frac{3}{r} a_r \right)} = \frac{a_r + \frac{3\omega}{r} a_r}{a_r + \frac{3\omega}{r} a_r} = \frac{1 + \frac{3\omega}{r}}{1 + \frac{3\omega}{r}} = \frac{1r}{1r} = \frac{1r \times r}{1r} = r$$

$$a_1 = 11$$

$$a_v = r_\omega \Rightarrow a_1 + d = r_\omega \Rightarrow r d = r_\omega \Rightarrow d = r$$

$$\left. \begin{array}{l} \Rightarrow a_n = r_{n+1} \\ a_r = \frac{r(r)}{r} + v = r_r \end{array} \right\}$$

$$b_1 = r_\lambda \quad b_1 = r_\lambda, b_r = r_r \Rightarrow b_r - b_1 = -1 \Rightarrow b_1 + r d' - b_1 = -1 \Rightarrow r d' = -1 \Rightarrow d' = -\frac{1}{r}$$

$$b_x = 1r \Rightarrow -a: \frac{b_n - b_1}{n-1} = \frac{r_n - r_\lambda}{n-1} = -\frac{1}{n-1} \Rightarrow \frac{-r_\omega}{n-1} = -\frac{1}{n-1} \Rightarrow n-1 = 1 \Rightarrow n = 2 \Rightarrow b_2 = 1r$$

$$b_r = a_r = r_r$$

$$b_1, \dots, b_4 \text{ } 1r$$

$$r_r, r_\lambda, r_r, 1r \Rightarrow \text{مقدار } 1, r, r, 1$$

$$\hookrightarrow a_r$$

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