

نام و نام خانوادگی: (نصیر) ۲۵ پاسخنامه تشریحی تکلیف شماره ۱۷۱... کلاس: ۲۵

$\textcircled{1}$ $\{1\}$ $\textcircled{2}$ $\{2, 3, 4\}$ $\textcircled{3}$ $\{5, 6, 7, 8, 9\}$ $\textcircled{n}$ $\{(n-1)^2 + 1, \dots, n^2\}$
 $\text{واسطه حسابی} = \frac{45 + 81}{2} = 73 \leftarrow n = 6 \{45, \dots, 81\}$

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$\textcircled{1}$ $\{1, 2, 3\}$ $\textcircled{2}$ $\{4, 5, \dots, 12\}$ $\textcircled{3}$ $\{13, \dots, 39\}$ $\textcircled{4}$ $\{40, \dots, 120\}$ $\textcircled{5}$ $\{121, \dots, 363\}$

$\frac{121 + 363}{2} = 242$

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$a_0, a_2, a_4, a_6 \rightarrow$ ضرایب $a_1, a_3, a_5 \rightarrow$ ضرایب $a_7, a_8, a_9 \rightarrow$ سوم

$S_{10} = 144 + (1+0) + 2(1+a) + 4+0 + (1+a) + 8 = 19 + a = -2$

$a_n = \left[\frac{n}{k+1} \right] - 2 \xrightarrow{n=3k+2} \left[\frac{3k+2}{k+1} \right] - 2 = \left[2 + \frac{1-2}{k+1} \right] - 2 = \left[\frac{k-1}{k+1} \right]$

این عبارت برای $k=0$ برابر ۱- و بقیه اعداد صحیح جز ۱- $\leftarrow -2$

$an^2 + bn + c \rightarrow \begin{cases} 25a + 5b + c = 14 \\ 49a + 7b + c = 17 \end{cases} \rightarrow \begin{cases} 24a + 2b = 3 \\ 48a + 2b = 12 \end{cases} \rightarrow \begin{cases} 24a = -9 \\ 24a = 9 \end{cases} \rightarrow \begin{cases} a = -\frac{3}{8} \\ a = \frac{3}{8} \end{cases}$

$\text{ضرب در ۸} \rightarrow a = \frac{1}{\sqrt{x}} \quad x - 14 = -\frac{1}{5}$

$22a + 5b + c = 14 \Rightarrow \frac{-25}{5} + 2b + c = 14 \Rightarrow c = -1$
 $\frac{+15}{+1} = \frac{14}{-\frac{1}{5}} = 14 \times \frac{5}{-1} = -70$

$\begin{cases} a_n = an + b \\ t_n = t_1 + (n-1)d \end{cases} \rightarrow \begin{cases} 4 = 2a + b \\ 8 = 5a + b \end{cases} \rightarrow \begin{cases} 4 = 2a + b \\ 4 = 3a \end{cases} \rightarrow \begin{cases} a = \frac{4}{3} \\ b = -\frac{4}{3} \end{cases}$

$a_{10} = 10a + b = 0 \rightarrow a_{12} = 12a + b = 2a + 10a + b = 2a = 4d$

$\frac{a_{12}}{d} = \frac{4d}{d} = 4$

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$$qa^r + 1ra d + qd^r = 2a^r + 1oad + ra^r + r^o d \Rightarrow ra^r + ad - qd^r \Rightarrow a = -rd$$

$$aa = \frac{r}{r} d \Rightarrow af = a + rd \begin{cases} af = d \\ af = \frac{1}{r} d \end{cases} \quad (y)$$

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$$b-d, b, b+d$$

$$b, \frac{b-d}{r}, \frac{b+d}{r}$$

$$\frac{b^r + bd}{f} = \frac{b^r - rdb + d^r}{f}$$

$$\Rightarrow d^r - rdb = 0$$

$$\Rightarrow d(d - rb) = 0 \Rightarrow d - rb = 0 \Rightarrow d = rb$$

$$b, -b, b \Rightarrow q = -1 \Rightarrow rq = -r \quad \checkmark$$

(y)

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$$a, aq, aa^r$$

$$ra q + aq^r = fa \Rightarrow ra + a^r = f \quad \left. \begin{array}{l} \\ \end{array} \right\} q^r + rq - f = 0$$

$$ra q, ra, aq^r$$

$$q = \frac{-r \pm \sqrt{r^2 + 4f}}{2} \begin{cases} q = -f\sqrt{} \\ q = 1 \quad x \end{cases} \Rightarrow \frac{aq^v}{aq^o} = q^r = (-f)^r = -f^r \quad \checkmark$$

(y)

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$$\frac{ar^r}{ar^r r^r} + \frac{ar}{a^r} = r \Rightarrow ra^r - ar - r^r = 0 \Rightarrow r = -ra \Rightarrow \frac{a^r}{ar} = \frac{a^r}{ar}$$

$$\Rightarrow \frac{a^r}{ar} = \frac{1}{r}, \frac{a^r}{-ra^r} = \frac{-1}{r} \quad \checkmark$$

(y)

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$$ar^r = af \Rightarrow ar^r = ar^r + a = \frac{1}{r} \Rightarrow a^r = r^r \Rightarrow r = r \quad \checkmark$$

$$a = \frac{1}{r} \Rightarrow \frac{1}{r} - \frac{1}{r} = \left(\frac{1}{r}\right) \quad \checkmark$$

(y)

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