

11, 25

تلف 17

A د

موسی بن نسی

$$\{1\}, \{2, 2, 2\}, \dots, \{45, \dots, 11\}$$

$$(n-1)^2 + 1 = 1 + 1 = 45$$

$$n^2 = 45 \times 2 = 11$$

$$45 \quad 11 \quad 11$$

$$\frac{11}{14}$$

$$\frac{11-45}{2} = \frac{11-45}{2} = 17$$

سوال 1: (2)

$$11-45 = \frac{11-45}{2} = 17 \quad 1+45 = 72$$

$$\{1, 2, 3\}, \{4, 5, 6, 7, 8, 9, 10, 11, 12\}, \dots$$

سوال 2: (2)

$$29-13 = \frac{29-13}{2} = 13$$

$$13+13 = 26$$

$$14 \times 2 = 141 + 1 = 149$$

$$149$$

$$121 + 29 = \frac{121+29}{2} = 75$$

$$198 + 245 = 443$$

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$$a_1 = -2 \times 0 + 2 = 2 \quad a_2 = \left[\frac{2}{0+2} \right] + a = 1 + a^{n-2} \quad a_3 = 2^1 = 2$$

$$a_4 = -2 \times 1 + 2 = 0 \quad a_5 = \left[\frac{0}{1+2} \right] + a = 1 + a^{n-4} \quad a_6 = 2^2 = 4$$

$$a_7 = -2 \times 2 + 2 = -2 \quad a_8 = \left[\frac{-2}{2+2} \right] + a = 2 + a \quad a_9 = 2^3 = 8$$

$$a_{10} = -2 \times 3 + 2 = -4 \quad a_{11} = \left[\frac{-4}{3+2} \right] + a = 3 + a$$

$$f + 1 + a + 2 + 3 + 1 + a + 2 + 0 + 2 + a + 1 + -2 = 19 \quad 2a + 22 = 19$$

$$a_{11} = \left[\frac{-4}{3+2} \right] + a = 3 + a \quad a_{12} = \left[\frac{19}{3+2} \right] + a = 3 + a$$

$$a_{13} = \left[\frac{19}{3+2} \right] + a = 3 + a$$

$$(1-1) + (1-1) + (2-1) + (2-1) + (2-1) + (2-1) + (2-1) + (2-1) + (2-1) + (2-1) = 1$$

جواب صفحه اخر...

$$H = a_d \quad IV, 2 = a_v \quad ax^2 + bx + c$$

$$ax^2 + bx + c$$

$$a_n = \frac{1}{V_0} n^2 + bn + c$$

سوال 3:

$$a_d = \frac{1}{V_0} d^2 + db + c = 14 \Rightarrow \frac{25}{V_0} + db + c = 14$$

$$a_v = \frac{1}{V_0} v^2 + vb + c = 17.2 \Rightarrow \frac{49}{V_0} + vb + c = 17.2$$

جواب صفحه اخر...

$$\left(\frac{49}{V_0} + vb + c \right) - \left(\frac{25}{V_0} + db + c \right) = 17.2 - 14 \quad \frac{24}{V_0} + 2b = 3.2$$

$$\frac{24}{V_0} + db + c = 14 \quad \frac{24}{V_0} + 2b = 3.2 \quad 2b = \frac{3.2}{2} = 1.6$$

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$$C = 9.5 \quad a_{12} = \frac{1}{V_0} 12^2 + 12 \times \frac{1.6}{2} + 9.5$$

$$\frac{225}{V_0} + \frac{19.2}{V_0} + 9.5 = \frac{244.2}{V_0} = \frac{111}{V_0} \quad a_1 = \frac{244.2}{25}$$

$$14 - \frac{V_d}{V_0} = 4.5$$

$$a_n = aq^{n-1}$$

$$\frac{a_1}{(a_1)^n} + \frac{a_r}{(a_1)^r} = r$$

$$\frac{a_1}{(a_1)^n} + \frac{a_r}{(a_1)^r} = r$$

$$\frac{a^r}{aq} = \frac{a}{q}$$

: سوال 9

(1, 2)

$$\frac{aq^0}{a^r q^r} + \frac{aq}{a^r} = \frac{aq^r}{a^r} + \frac{aq}{a^r} = \frac{aq^r}{a^r} + \frac{a^r q}{a^r}$$

$$\frac{q^r + aq}{a^r} = \frac{q(q+a)}{a^r} = r \Rightarrow ra^r = q(q+a)$$

$$\frac{q^r}{a^r} + \frac{q}{a^r} = \frac{q^r + q}{a^r} = r$$

$$ra^r = q^r + q \rightarrow (q^r = ra^r - q) \times \frac{1}{q^r} < -\frac{1}{r} \checkmark$$

$$a_r = \sqrt{a_f} \quad a_d = rV$$

$$(a_r)^r = a_f \quad a_1 - \frac{1}{r} = ?$$

$$\frac{aq^r}{a^r q^r} + \frac{aq}{a^r} = r \rightarrow \left(\frac{q}{a}\right)^r + \frac{q}{a} = r \rightarrow \begin{cases} \frac{q}{a} = 1 - \frac{a^r}{a_r} = 1 \\ \frac{q}{a} = r - \frac{a^r}{a_r} = -\frac{1}{r} \end{cases}$$

: سوال 10

(2)

$$a^r q^r = aq^r = a^r q = aq \quad a^r q = a \quad q = \frac{a}{a^r} \quad q = \frac{1}{a} \quad \frac{q}{1} = \frac{1}{a}$$

$$a_d = aq^r \quad a_d = a \times \left(\frac{1}{a}\right)^r \quad a^d = a \times \frac{1}{a^r} \quad \frac{a}{a^r} = \frac{1}{a^r} = rV \quad a^r = \frac{1}{rV} = \frac{1}{a}$$

$$\rightarrow a = \frac{1}{r} \checkmark q^r = 1 \rightarrow q = r \quad a_1 \rightarrow \frac{1}{r} - \frac{1}{r} = \frac{r}{q} - \frac{r}{q} = \frac{1}{q} = 1 \rightarrow \frac{1}{q} \checkmark$$

ضابطه اول $a_0, a_3, a_4, a_9 \rightarrow$

ضابطه دوم $a_1, a_4, a_7 \rightarrow$

ضابطه سوم $a_2, a_5, a_8 \rightarrow$

$$S_{11} = 1 + 4 + (1+a) + 2 + (1+a) + 4 + 0 + (2+a) + 8 = 19 \rightarrow a = -2$$

جمع جملات خواسته شده از ضابطه سوم به دست میاد :

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

این عبارت به ازای $K=0$ برابر ۱- و به ازای بقیه اعداد صحفه پس جواب خواسته شده ۲-
۳

$$t_n = an^r + bn + c \rightarrow \begin{cases} t_5 = 25a + 5b + c = 14 \\ t_7 = 49a + 7b + c = 17,2 \end{cases} \rightarrow 12a + b = 1,4$$

$$a = \frac{1}{12} (-14) \rightarrow a = -\frac{1}{5}$$

ضریب بنزرتیه درجه جمله عمومی a است.

$$12a + b = 1,4 \xrightarrow{a = -0,2} b = 4$$

$$t_5 = 14 \xrightarrow{a \text{ و } b \text{ و } r \text{ بداری}} c = -1$$

$$t_{15} = 14 \quad t_1 = 2,8 \rightarrow \frac{14}{2,8} = 5$$

$$a_f = b_r \rightarrow a_1 + r_d = b_r$$

$$a_n = b_v \rightarrow a_1 + v_d = b_v \rightarrow b_v - b_r = f_d$$

با حفظ $\rightarrow b_n = Cn + K$

$$b_v - b_r = v_c + K - (r_c + K) = \Delta C$$

$$f_d = \Delta C$$

$$b_{10} = 0 \rightarrow 10C + K = 0 \rightarrow K = -10C$$

$$\frac{b_{10}}{d} = \frac{10C + \overset{-10C}{K}}{\frac{\Delta}{F}C} = K$$

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دنباله حسابی

اگر خطی