

۱۹۱۷۵ ~ آفرین به سفا

ساده ترین

1 1

سوال ۱: $\{1\}, \{2, 3, 4\}, \{5, 6, 7, 8, 9\}, \dots, \{45\}$
 $(1) \quad (2) \quad (3) \quad \dots \quad (9)$ ۱, ۷۵

$$\begin{aligned} 1 &= 1 \\ 2 &= 2^2 \\ 3 &= 3^2 \\ 4 &= 4^2 \\ 5 &= 5^2 \\ 6 &= 6^2 \\ 7 &= 7^2 \\ 8 &= 8^2 \\ 9 &= 9^2 \end{aligned} \quad \Rightarrow \quad \frac{1+45}{2} = \frac{149}{2} = 74.5 \quad \frac{1+45}{2} = 74.5$$

$$\begin{aligned} 1 &= 1^2 \\ 2 &= 2^2 \\ 3 &= 3^2 \\ 4 &= 4^2 \\ 5 &= 5^2 \\ 6 &= 6^2 \\ 7 &= 7^2 \\ 8 &= 8^2 \\ 9 &= 9^2 \end{aligned} \quad \Rightarrow \quad 44+1 = 45 \quad \text{ای ۱}$$

$$1 \text{ ستاره} = \{1, 2, 3\} \quad 2 \text{ ستاره} = \{4, 5, \dots, 12\}$$

$$3 \text{ ستاره} = \{13, \dots, 39\} \quad 4 \text{ ستاره} = \{40, \dots, 120\}$$

$$5 \text{ ستاره} = \{121, \dots, 361\} \quad \frac{121-361}{2} = -120$$

سوال ۲

۲

سوال ۳

$$a_n \begin{cases} a_0 = 1 \\ a_1 = 2 \\ a_2 = 4 \\ a_3 = 8 \end{cases} \quad \text{تابع اول} \quad \begin{cases} a_1 = 4 \\ a_2 = 2 \\ a_3 = 1 \end{cases} \quad \text{تابع دوم}$$

$$a_n \begin{cases} a_1 = a_{n+1} \\ a_2 = a_{n+1} \\ a_n = 24a \end{cases} \quad \left. \begin{aligned} & \\ & \\ & \end{aligned} \right\} \quad \begin{aligned} & \\ & \\ & \end{aligned} \quad \rightarrow \quad a = -2$$

$$a_n \left[\frac{n}{k+r} \right] + a \rightsquigarrow S_n = \left[\frac{k-r}{k+r} \right]$$

$$-1 - 1 + \dots = -2$$

انتقال

بارت بنویس

$$\begin{cases} t_a = 2a + ab + c = 18 \\ t_v = 4a + vb + c = 14,4 \end{cases} \quad \text{if } a + b = 1,4$$

سوال ٥

د

$$a = \frac{1}{v} (-t_a) = a = -\frac{1}{a} \quad 11a + b = 1,4$$

$$\downarrow$$

$$11x - \frac{1}{10} + b = 1,4 \quad b = 1$$

$$t_a = 18 \quad 2a(-\frac{1}{10}) + 4(a) + c = 18 \quad c = -1$$

$$\frac{a_{12}}{a_1} = \frac{18}{2,1} = \bar{a} \quad \checkmark$$

$$L_{1c} = 0 \Rightarrow 1 \cdot a + b = 0 \Rightarrow b = -1 \cdot a$$

سوال ٦

$$L_n = a_n - 1 \cdot a = a(n-1)$$

د

$$A_f = L_r \Rightarrow a(r-1) = \Delta a$$

$$A_n = L_v = a(v-1) = -ra$$

$$A_n - A_f = (1-f)d = \epsilon d$$

$$-ra - (-1a) = \epsilon d$$

$$\Delta a = \epsilon d \Rightarrow d = \frac{\Delta a}{\epsilon} \quad \leadsto \quad L_{1a} = a(1a-1) = \Delta a$$

$$\frac{L_{1a}}{d} = \frac{\Delta a}{\frac{\Delta a}{\epsilon}} = \epsilon \quad \checkmark$$



$$q(a_1 + d)^r = a(a_1 + rd)a + r(a_1 + d)a$$

سوال 2

$$qa_1^r + qd^r + qa_1d = \Lambda a_1^r + 1ra_1d$$

$$ra_1^r + a_1d - qd^r = 0$$

$$\frac{a_1^r}{d} = \frac{a_1 + rd}{d} = \frac{a_1}{d} + r$$

$$d \neq 0 \quad r \frac{a_1}{d} = \frac{a_1d}{dr} - \frac{qd^r}{dr} = 0$$

$$\Rightarrow r\left(\frac{a_1}{d}\right)^r + \left(\frac{a_1}{d}\right) - r = 0$$

$$0 = 1^r - r \times r - r = -r^2 \Rightarrow r^r \quad \frac{-1 + -r}{r} \bar{w}$$

$$\frac{-r + r}{r} = \frac{r}{r} n_1 \quad \frac{-1 - r}{r} = -r n_1$$

$$\left(\frac{a_1}{d}\right)_1 = n_1 + r = \frac{r}{r} + r = \frac{r}{c}$$

$$\left(\frac{a_1}{d}\right)_c = n_r + r = 1$$

$$rb = a + c \quad \left(\frac{a}{r}\right)^r = \frac{c}{r} \times b = \frac{a^r}{r} - \frac{cb}{r} \Rightarrow a^r = cb \quad \text{سوال 3}$$

$$q = \frac{a}{r} = \frac{a}{r} \times \frac{r}{c} = \frac{ra}{c} \quad , \quad q = \frac{b}{\frac{a}{r}} = \frac{rb}{a}$$

$$\frac{ra}{c} = \frac{rb}{a} \Rightarrow \frac{a}{c} = \frac{b}{a}$$

$$c = rb - a \quad a^r = (rb - a)b$$

$$\Rightarrow a^r = rb^r - ab \Rightarrow a^r + ab - rb^r = 0 \quad b \neq 0$$

$$\left(\frac{a}{b}\right)^r + \left(\frac{a}{b}\right) - r = 0 \Rightarrow n^r + n - r = 0$$

• dot note

$$(n+r)(n-1) = 0$$

$$a = -rb \quad rb = c + -rb \Rightarrow c = -rb$$

$$\frac{a}{b} = -r \quad \frac{a}{b} = 1$$

$$q = \frac{ra}{c} \quad q = \frac{-rb}{-rb} = -1 \quad ra = r(-1) = -r \quad a = -rb$$

$$b = ar \quad c = ar^2$$

$$Y(r) = C + 3b \leadsto \epsilon a = C + 3b \quad \epsilon a = ar^2 + 3(ar) \quad \text{سوال 1}$$

$$\epsilon = r^2 + 3r \leadsto r^2 + 3r - \epsilon = 0 \leadsto (r+6)(r-1) = 0$$

$$\frac{t_9}{t_4} = r^3 \leadsto (-6)^3 = -4r \quad r=2 \quad r=-6$$

$$\frac{a_1 r^2}{a_1 r^2} + \frac{r}{a_1} = r \quad \frac{r^2}{a_1} + \frac{r}{a_1} = r \quad \text{سوال 2}$$

$$r^2 + r a_1 = r a_1$$

$$r a_1^2 - r a_1 - r^2 = 0 \quad a_1 = \frac{r \pm \sqrt{9r^2}}{\epsilon} \quad |r^2 = r| \rightarrow a_1 = -\frac{r}{\epsilon}$$

$$|r| = r < 0 \rightarrow a_1 = r$$

$$\frac{a_1}{r} = -\frac{1}{r} \quad \frac{a_1}{r} = \frac{r}{r} = 1$$

$$a_r = \sqrt{a_\epsilon}, \quad a_\Delta = 2r \quad \text{سوال 1}$$

$$a_r = a_1 r^2, \quad a_\epsilon = a_1 r^3, \quad a_\Delta = a_1 r^4 \quad \checkmark$$

$$a_1 r^2 = \sqrt{a_1 r^3} \Rightarrow a_1^2 r^4 = a_1 r^3$$

$$a_\Delta = 2r \quad a_1 r^4 = 2r \quad (a_1 r) r^3 = 2r \quad 1. r^3 = 2r$$

$$r^3 = 2r$$

$$a_1 \times r = 1 \quad a_1 \times r^3 = 1 \leadsto a_1 = \frac{1}{r^3} \quad r = 2$$

$$\frac{1}{2} - \frac{1}{8} = \frac{1}{8} \quad \checkmark$$

