

11, 2

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$$4q^2 - 17q + 4 = 0 \Rightarrow (4q - 1)(q - 4) = 0$$

$q \sim 1/r$ ✓

$0 < q \leq 1$

$$\frac{\lambda \left(\frac{12V}{12\lambda} \right)}{\frac{1}{\lambda}} = \frac{12V}{\frac{14}{\frac{1}{\lambda}}} = \frac{12V}{\lambda}$$

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$$\frac{2n}{n^2 + 4} \approx \frac{n^2 - 2}{2n}$$

$$m^4 + \cancel{4m^2} - 2m^2 - 8 = \cancel{4m^2} \rightarrow m^4 - 2m^2 - 8 = 0$$

$$(m^2 + 2)(m^2 - 4) = 0 \xrightarrow{m^2 = 4} 8, 4, 2 \rightarrow q = \frac{1}{2}$$

$$S_7 = a_1 \left(\frac{q^7 - 1}{q - 1} \right) = 8 \left(\frac{1 - \frac{1}{128}}{1 - \frac{1}{2}} \right) = 8 \left(\frac{\frac{127}{128} \cdot 64}{\frac{1}{2}} \right) = \frac{127}{2}$$

$$q^4 + q^3 + q^2 + q + 1 = \frac{121}{11} \quad a_1 = 121 \quad S_{\Delta 2}(q, (q^4 + q^3 + q^2 + q + 1))$$

$1 \xrightarrow{2} A \xrightarrow{2} 64 \rightarrow \text{جوابی } A_2 \frac{1+64}{2} = \frac{65}{2} = 32,5. \quad [\text{ع}]$

$$1, B, 64 \rightarrow \text{size} \rightarrow B^2 = 64 \rightarrow B = \pm 8$$

$\overset{\curvearrowright}{2} \quad \overset{\curvearrowright}{2}$
 $A+B = 32,5 + 8 = 40,5$
 $A+B = 32,5 - 8 = 24,5$

$-24, \frac{95}{4}, \dots \rightarrow -24, -23, \dots$
 $a_n = -24 + (n-1) \cdot \frac{1}{4}$
 $n = 1, 2, \dots$

$$128, a_2 \rightarrow a_n \approx 128 \times 9^{n-1}$$

$$n_2 8 \rightarrow 128 \times 9^{n-1}$$

$$128 \propto q_2^7 \rightarrow q_2 \checkmark \frac{1}{2}$$

q_3, q_7, q_9

$$r_2 dr_2 - r_2 a dr_2$$

$$a_1 + rd, a_1 + rd, a_1 + rd$$

$$d(1, d+a) = 0 \quad \begin{matrix} d_1 = 0 \\ d_2 = -a_1 \\ \hline d_3 = 0 \end{matrix}$$

$$\frac{a_1 + 4d}{1} = \frac{a_1 + nd}{1} \rightarrow a_1 + 10d + 4d = a_1 + 10d + 4d$$

$$a_1, a_2, a_n$$

سوال ۱

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$$a_1 + rd = \frac{a_1 + rd}{a_1 + d} = \frac{a_1 + vd}{a_1 + d} = q = r$$

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$$a_1 + vd = a_1 + qd + rad = a_1 + n ad + vd$$

$$rd = rad \quad d(d - a) = d = 0$$

$$d = a \rightarrow q = 1$$

$$a_n = \frac{1}{\epsilon} \times r^n = \frac{1}{\epsilon} \times 1^n$$

$$a_n = a_1 q^{n-1} \rightarrow a_1 = \frac{1}{\epsilon}, q = 1 \rightarrow n = 10$$

$$ra_1, ra_2, a_3$$

$$a q^2 - r a q^2 = r a q^2 - r a q$$

۱, ۷۵

$$r a q, r a q^2, a q^3$$

$$q^2 - r q = r q - r \quad q^2 - r q + r = 0$$

$$(q-1)(q-r) = 0 \rightarrow q = 1 \rightarrow \text{دنباله غیر ثابت است غلطی}$$

$$q = r$$

$$a_n = r - \frac{(n-1)}{r} = \frac{n-n+1}{\epsilon} = \frac{1-n}{\epsilon}$$

۱, ۵

$$\frac{1}{\epsilon} + n \quad \frac{1}{\epsilon} + n \quad -1 + n$$

$$\frac{n-1}{n+\frac{1}{\epsilon}} = \frac{n+\frac{1}{\epsilon}}{n+\frac{1}{\epsilon}} = \frac{\Sigma n - 1}{\Sigma n + 1} = \frac{\Sigma n + 1}{\Sigma n + 1} \rightarrow 14m^2 + (n-1) = -14m^2 + 1 + 14m$$

$$\Sigma n = -2 \quad m = -\frac{1}{\epsilon} \quad \therefore 0 \text{ دانسته}$$

$$a_1 + a_2 + a_3 = a_1 (1 + q + q^2) = vr$$

۱, ۵

$$a_1, a_2 = ad \quad , a_3 = ar + ad$$

$$a + ad = a + d = a + d = a$$

$$rd = d \quad vd = 0 \rightarrow d = 0 \rightarrow a_1, a_2, a_3$$

$$\boxed{\text{سوال ۲} \checkmark}$$

$$ar - ar = br - br = d$$

$$ar - ar = br - br = 9d$$

$$\frac{a(q^r - 1)}{a(q^4 - 1)} = \frac{d}{9d} \rightarrow q^{r+1} = 9 \rightarrow q = 3 \quad (1)$$

$$a + aq^r + aq^4 = a + 1a + 4a = 1^r a \rightarrow a = 1$$

$$ar - ar = d \rightarrow (1 \times 3^r) - 1 = 9 \rightarrow d = 9$$

$$ar - ar = d \rightarrow \frac{3}{r} - 1 = -\frac{1}{r} \rightarrow d = -\frac{1}{r}$$

$$an = 1 + (n-1) \cdot \frac{1}{r} \rightarrow an = \frac{1-n}{r} \rightarrow an = -\frac{n}{r} + \frac{1}{r}$$

$$\int ar = \frac{1}{r} \quad (n=1)$$

$$\left\{ \begin{array}{l} an = \frac{1}{r} \quad (n=1) \\ a_{13} = -1 \quad (n=13) \end{array} \right.$$

$$\left\{ \begin{array}{l} a_{13} = -1 \quad (n=13) \end{array} \right.$$

$$\left\{ \begin{array}{l} \left(\frac{1}{r} + x \right) (-1 + x) = \left(\frac{1}{r} + x \right)^r \\ -\frac{1}{r} + \frac{x}{r} + x^r = x^r + \frac{1}{r}x + \frac{1}{r^2} \\ \frac{x}{r} = -\frac{1}{r^2} \rightarrow x = -\frac{1}{r} = -\frac{1}{13} \end{array} \right.$$

$$\text{حالت دوم} \rightarrow (-1, -1, -4, 13) \rightarrow q = \frac{ar}{a_1} = \frac{-1}{-1} = 1$$