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19

مؤخرات مسائل عینی

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 t_1, ε q_1 ε_0

$$t_1 = q_1 \rightarrow t_1 = t_1 + r d \rightarrow r d = q_1 \rightarrow d = q_1$$

$$n = 25$$

$$t_1 + (n-1)d = r \cdot n \rightarrow \varepsilon_0 + (n-1)V = r \cdot n \rightarrow \varepsilon_0 + Vn - V \cdot r \cdot n = r \cdot n \cdot V$$

$$\frac{q_1}{V} = 1 \varepsilon$$

$$q_n = Vn + r^2 \quad 100 \leq Vn + r^2 \leq 1000$$

$$q_n + r^2 \geq 101$$

$$9V \leq Vn \leq 99V \rightarrow 19 \leq Vn \leq 181$$

$$\frac{181 \cdot 19}{1} + 1 = 129 \rightarrow n$$

$$a_{n+1} + a_{n+2} + a_{n+3} = 4n + 12$$

$$a_{14} + a_{15} =$$

$$a_1 = a_1 + 4d$$

$$a_{14} = a_1 + 14d$$

$$a_1 + a_2 + a_3 = 12$$

$$a + d + a + 2d + a + 3d = 4 \rightarrow 3a + 6d = 4 \rightarrow a + 2d = \frac{4}{3}$$

$$\frac{n}{2}(a_1 + a_n) = r(a_1 + a_n) - a_1 = a_1 + a_2 + a_3 \rightarrow a_1 + a_n = a_2 + a_3 = 4$$

$$a_n + a_1 = 4a_1 + 4rd \rightarrow$$

زمرہ ریاضیات عمومی

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$$\begin{aligned} 1 & r^n - 1 = a_n \\ 2 & r^{n+1} = a_{n+1} \\ 3 & r^m - r = a_{m+1} \end{aligned} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} r a_1 + r^m d =$$

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$$4 \quad d = \frac{r^{n+1} - r^m - 1}{\omega} = \frac{r^n (r - 1) - 1}{\omega} = \frac{r^n - 1}{\omega}$$

$$5 \quad d = \frac{r^m - r - r^{n+1}}{\omega} = \frac{r^n (r^n - r) - r}{\omega} = \frac{r^n - 1}{\omega}$$

$$6 \quad r^n (r^n - r) - r = r^n - 1 \rightarrow r^n (r^n - r) - r^n = r - 1$$

$$7 \quad r^n (r^n - r - 1) = r - 1 \Rightarrow$$

$$8 \quad r^n - r = 1 \Rightarrow r^n = r + 1$$

$$9 \quad \boxed{r = r}$$

$$10 \quad \boxed{r = r} \Rightarrow a_r = r \quad a_1 = 1 \quad a_{m+1} = r \Rightarrow r + 1 + r = r^2$$

$$11 \quad n = 1 \rightarrow ar + ar + ar = 4 \quad \left. \begin{array}{l} \\ \end{array} \right\} \rightarrow ar - ar = -4$$

$$12 \quad n = 2 \rightarrow ar + ar + ar = 0 \quad \left. \begin{array}{l} \\ \end{array} \right\} \rightarrow ar = -4 \rightarrow d = -1$$

$$13 \quad ar + ar + ar = r a_1 + 4d = 4 \rightarrow r a_1 = 11 \rightarrow a_1 = 4$$

$$14 \quad ar + ar + ar = a_1 + 4d + a_1 + 4d = r a_1 + 8d = 11 + 8(-1)$$

$$m_1 + 11d \rightarrow$$

دو طرفه مساوي

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$$Q_{11} - Q_{10} = \Delta \rightarrow Q_1 + 11d - Q_1 - 9d = 2d = \Delta \rightarrow d = \frac{\Delta}{2}$$

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$$Q_{11} + Q_{10} = Q_1 + 11d + Q_1 + 9d = 2Q_1 + 20d = 2\Delta$$

$$2(Q_1 + 10d) = 2\Delta \rightarrow Q_1 + 10d = \frac{2\Delta}{2} \rightarrow$$

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$$Q_{11} = Q_1 + 20d$$

$$-12\Delta + \left(\frac{12}{2} \times \frac{\Delta}{2}\right) = 12\Delta$$

$$Q_1 + \left(\frac{12}{2} \times \frac{\Delta}{2}\right) = \frac{2\Delta}{2}$$

$$Q_1 = \frac{2\Delta}{2} - 12\Delta \rightarrow Q_1 = -10\Delta$$

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Arman

$$S_n = \frac{a}{r} (a_1 + a_n)$$

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مجموع
دوم

$$S_n - S_{n-1} = \frac{1}{r} (a_1 + a_n) - \frac{1}{r} (a_1 + a_{n-1})$$

$$\frac{a}{r} (a_1 + a_n) = \frac{1}{r} \left(\frac{a}{r} (a_1 + a_{n-1}) - \frac{a}{r} (a_1 + a_n) \right) \rightarrow \frac{a}{r} (a_1 + a_n) = \frac{a}{r} (a_1 + a_{n-1}) - \frac{a}{r} (a_1 + a_n)$$

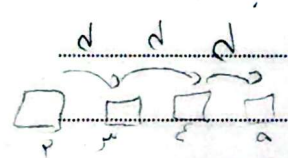
$$\frac{a}{r} (a_1 + a_n) + \frac{a}{r} (a_1 + a_n) = \frac{a}{r} (a_1 + a_{n-1}) \rightarrow (a_1 + a_n) \left(\frac{a}{r} + \frac{a}{r} \right) = \frac{a}{r} (a_1 + a_{n-1})$$

$$(a_1 + a_n) \frac{2a}{r} = \frac{a}{r} (a_1 + a_{n-1}) \rightarrow 2(a_1 + a_n) = a_1 + a_{n-1} \rightarrow a_1 + a_n = a_{n-1}$$

$$a_1 + a_{n-1} + 1d = a_{n-1} + d \rightarrow a_1 = d \rightarrow a_1 = \frac{d}{r}$$

$$\frac{a_r}{a_1} = \frac{a_1 + d}{a_1} = \frac{\frac{d}{r} + d}{\frac{d}{r}}$$

$$\frac{\frac{d}{r} + \frac{rd}{r}}{\frac{d}{r}} = \frac{\frac{r}{r} + \frac{rd}{d}}{\frac{r}{d}} = \frac{1 + r}{\frac{r}{d}} = \frac{d(1+r)}{r}$$



$$t_n = t_{n-1} + 1d$$

$$rd = 1d$$

$$r = 1$$

$$t_a = a_1 + 1d = a_1 + \epsilon_0$$

$$t_a = a_1 + \epsilon_0 d = a_1 + r_0 \Rightarrow$$

$$t_v = a_1 + qd = a_1 + r_0$$

$$t_q - t_a = (t_q - t_a)(t_q + t_a) \quad r$$

$$r_0 (r_a + r_0) = r_0 a + 1r_0$$

$$\frac{t_q^r - t_a^r}{t_v} = \frac{\epsilon_0 a + 1r_0}{a + r_0} = r_0 \left(\frac{a + r_0}{a + r_0} \right) = r_0$$

$$t_q^r - t_a^r = \epsilon_0 t_v$$

(1)

$$\frac{b-a}{n+1} = d \rightarrow \frac{2+\sqrt{3}-2+12\sqrt{3}}{13} = d \rightarrow \frac{13\sqrt{3}}{13} = \sqrt{3}$$

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$$d = \frac{b-a}{n+1} \rightarrow \frac{32-2}{14-2+1} \Rightarrow \frac{30}{13} \Rightarrow \frac{15}{6.5}$$

$$p/n \text{ sub } = a_{n+1} \rightarrow a_1 + n \times d = a_{n+1}$$

$$a_{n+1} = a_1 + n \times d \rightarrow \frac{2+15n}{13-1} = 11 \rightarrow \frac{15n}{12} = 9 \rightarrow$$

$$15n - 9 \times 12 = 0 \rightarrow 15n = 108 \rightarrow \boxed{n=7.2}$$

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$$\frac{a+vd}{a+vd} = 3 \rightarrow \frac{a+9d}{a+vd} = a+vd \rightarrow \frac{a}{a} = -\frac{9d}{vd} \rightarrow a = -d$$

$$a_p + a_v = a_n + a_{n+1} \rightarrow a_p + a_v = a_n + a_{n+1}$$

$$n + n + 1 = 2n + 1 \rightarrow 2n + 1 = 2n$$

$$2n = 14$$

$$n = 7$$