

$$\frac{a}{q} \times a \times aq = a^3 = 27 \Rightarrow a = 3$$

$$\frac{r}{q} + r + rq = 21 \Rightarrow r + rq + rq^2 = 21q \Rightarrow r(1 + q + q^2) = 21q$$

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$$\Rightarrow q = \left\{ \begin{array}{l} \frac{1}{3} \\ \frac{14}{3} \end{array} \right\} \rightarrow \text{عق} \quad q = \frac{1}{3} \checkmark$$

$$K_1 = a^r + r a^r - 1 \Rightarrow a^r - r a^r - 1 = 0 \Rightarrow (a^r - 1)(a^r + 1) = 0$$

$$\Rightarrow a = \begin{cases} 3 \rightarrow a_r & a_r & a_r & a_r \\ -3 \rightarrow a_r & a_r & a_r & a_r \end{cases} \rightarrow q = \frac{1}{3} \checkmark$$

$$S_v = a \left(\frac{q^v - 1}{q - 1} \right) = 1 \left(\frac{1 - \frac{1}{3^v}}{1 - \frac{1}{3}} \right) = 1 \cdot \frac{\frac{1 - \frac{1}{3^v}}{1 - \frac{1}{3}}}{\frac{1}{3}} = \frac{1 - \frac{1}{3^v}}{\frac{1}{3}} = 3 \left(1 - \frac{1}{3^v} \right)$$

$$a + aq + aq^2 + aq^3 + aq^4 = a(1 + q + q^2 + q^3 + q^4) = 121$$

$$3 \times \frac{121}{3} = 37 \checkmark$$

$$a_1 + a_v = a_r + a_r \Rightarrow a_r = \frac{a_r + 1}{r} = 37, \omega = A$$

$$b_r = b, b_v = 1 \times a_r \Rightarrow b_r = \pm 1$$

$$A + B \rightarrow \begin{cases} r, \omega \checkmark \\ r, \omega \checkmark \end{cases}$$

$$\frac{-99}{r}, \frac{-9\omega}{r}, \dots \Rightarrow a_{1,1} = a_{1,1} \dots a_{1,1} = -r + \frac{1}{r} = 1$$

$$\frac{a_1}{a_1} = q^v = \frac{1}{121} \Rightarrow q = \frac{1}{3} \checkmark$$

$$a_v^r = a_r \times a_q \Rightarrow (a + qd)^r = (a + d)(a + \lambda d) = a^r + r a d + r q d^r = a^r + 1 a d + r q d^r = a^r + 1 a d + r q d^r$$

$$1 r a d + r q d^r = 1 a d + r q d^r \Rightarrow \begin{cases} d = 0 \\ d = \frac{a}{1} \end{cases}$$

(2)

$$a_r^r = a_r \times a_\lambda \Rightarrow (a + r d)^r = (a + d)(a + v d) \Rightarrow a^r + r a d + r^2 d^r = a^r + \lambda a d + v d^r$$

$$\Rightarrow r a d + r^2 d^r = \lambda a d + v d^r \Rightarrow d^r - a d = 0 \Rightarrow d(d - a) = 0 \Rightarrow d = \begin{cases} 0 \\ a \end{cases}$$

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$$a_r \quad a_r \quad a_\lambda \Rightarrow q = r$$

$$a_1 = a, q = \frac{1}{r} \times r = r^v = 121 \checkmark$$

(2)

$$b_1, b_r, b_r \left\{ \begin{array}{l} r b_r = b_1 + b_r \Rightarrow r a q^r = r a q + a q^r \\ r a q, r a q^r, a q^r \end{array} \right\} \Rightarrow a q(r q) = a q(r + q^r)$$

چون غیر ثابت است $a q$ ، ساده می کنیم.

$$= r q = r + q^r \Rightarrow q^r - r q + r = 0 \Rightarrow q = \begin{cases} 1 \quad \times \rightarrow \text{غیر ثابت} \\ r \quad \checkmark \end{cases}$$

(2)

$$a_r \quad a_\lambda \quad a_{12} \quad a_\lambda^r = a_r \times a_{12} \Rightarrow \left(\frac{r\omega}{r} + \frac{r\omega}{r} \right)^r = \left(\frac{12}{r} + \frac{r\omega}{r} \right) \left(\frac{r\omega}{r} + \frac{r\omega}{r} \right)$$

$$\Rightarrow \frac{12}{r} + 2009 + 612\omega = 12\omega + 2112\omega + \omega^2$$

$$10\omega = 12\omega \Rightarrow \omega = \frac{10\omega}{12} = \frac{5\omega}{6}$$

$$\frac{12}{r} + \frac{r\omega}{r}, \frac{r\omega}{r} + \frac{r\omega}{r}, \frac{r\omega}{r} + \frac{r\omega}{r}$$

$$\frac{12}{r}, \frac{r\omega}{r}, \frac{r\omega}{r} \quad q = \frac{12}{r} = \frac{12}{12} = 1 \checkmark$$

(2)

$$\frac{a_v}{a_r} = \frac{a_r}{a_1} = q^r = \frac{10 - r}{r - 1} = 1 \Rightarrow q = r$$

$$a + a q^r + a q^r = v r \Rightarrow a + \lambda a + q r a = v r \Rightarrow a = 1$$

$$b_1 = a_1 = 1$$

$$b_r = a_r = \lambda a = \lambda$$

$$b_r - b_1 = d = v \checkmark$$

حالت دوم (ثابت) $\rightarrow q = 1$

$$d = 0$$

(1,5)