

$$a_1 + a_r + a_w = 21$$

سؤال ۱

$$a_1 \times a_r \times a_w = 9K \rightarrow (a_r)^3 = 9K \Rightarrow \boxed{a_r = K} \Rightarrow \frac{a_r}{q} + a_r + a_r q = 21$$

$$\left(\frac{K}{q} + Kq = 14 \right) \times q \Rightarrow \frac{K}{q} + K + Kq = 14$$

$$Kq^2 - 14q + K = 0 \xrightarrow{\text{تجزیه}} q^2 - 14q + 14 = 0 \Rightarrow \begin{cases} q = \frac{14}{K} \\ q = -K \end{cases} \rightarrow \text{قد رتیق}$$

$$b^2 = ac \Rightarrow (2m)^2 = (m^2 + K)(m^2 - 2)$$

سؤال ۲

$$4m^2 = m^4 - 2 + 2m^2 \Rightarrow 2m^2 = m^4 - 2 \Rightarrow m^4 - 2m^2 - 2 = 0$$

$$(m^2 - K)(m^2 + 2) = 0 \Rightarrow \begin{cases} m^2 = -2 \rightarrow \text{غیرممکن} \\ m^2 = K \end{cases}$$

$$m = \pm \sqrt{K}$$

$$m^2 + K = 14, m^2 - 2 = 2 \Rightarrow a_n = 14, K, 2, 1, \frac{1}{2}, \frac{1}{K}, \frac{1}{14}$$

$$S_n = a_1 \left(\frac{q^n - 1}{q - 1} \right) \Rightarrow S_n = 14 \left(\frac{1 + \frac{1}{K} - 1}{\frac{1}{K} - 1} \right) = 14 \times \left(\frac{\frac{1}{K}}{\frac{1}{K} - 1} \right)$$

$$14 \times \left(\frac{1 + \frac{1}{K}}{\frac{1}{K} - 1} \right) = 14 \times \frac{1 + \frac{1}{K}}{\frac{1}{K} - 1} = \boxed{\frac{14K}{K-1}}$$

$$1 + q + q^2 + q^3 + q^4 = \frac{141}{11}$$

سؤال ۳

$$a_1 = 2K^3$$

$$a_1 + a_r + a_w + a_K + a_{\infty} = ?$$

$$2K^3 + 2K^3q + 2K^3q^2 + 2K^3q^3 + 2K^3q^4 = 2K^3 \times \frac{141}{11} = \boxed{\frac{282K^3}{11}}$$

$$d = \frac{q^K - 1}{\omega + 1} = \log_{\omega} \omega^{\frac{1}{\omega+1}} = \log_{\omega} \omega^{\frac{1}{\omega+1}} = A$$

سؤال ۴

$$q = \frac{q^K}{1} = q^{\omega+1} \Rightarrow q = \pm 1 \Rightarrow \log_{\omega} \omega^{\pm 1} = \pm 1 = B \Rightarrow A+B = \log_{\omega} \omega^{\pm 1} = \boxed{\pm 1}$$

$$-2\epsilon, -\frac{q\omega}{K}, \dots \Rightarrow d = \frac{1}{K}$$

سؤال ۵

$$a_{101} = a + 100d \Rightarrow -2\epsilon + 2\omega = 1$$

$$a_{101} = 1 \Rightarrow a_{\infty} = 1 \Rightarrow 1 = aq^{\infty} \Rightarrow 12\omega \times q^{\infty} = 1 \Rightarrow \boxed{q = \frac{1}{12\omega}}$$

$$d' = vad$$

$$d = va$$

(ادامہ جواب سوال ۱۰)

$$3a + 1.0d = v1$$

$$3a + v_0 a = v1 \Rightarrow a = 1 \Rightarrow d = va \Rightarrow \boxed{d = v} \quad \text{Date:}$$

$$\underline{a_\mu}, \underline{a_\nu}, \underline{a_\eta}$$

$$b' = ac$$

(سوال ۶)

$$\frac{a_\mu}{a+rd}, \frac{a_\nu}{a+rd}, \frac{a_\eta}{a+rd} \Rightarrow (a+rd)' = (a+rd)(a+rd)$$

$$a' + 1.9d' + 1.9ad = a' + 1.9d' + 1.9ad \Rightarrow 1.9d' = -1.9ad$$

$$a_\eta = -1.9d, a_\nu = -1.9d, a_\mu = a+rd = -1.9d \Rightarrow a = -1.9d$$

$$a_1, a_\mu, a_\nu, a_\eta \rightarrow -1.9d, -9d, -1.9d, -1.9d$$

$$d = \frac{-a}{1.9}$$

$$\underline{a_\mu}, \underline{a_\nu}, \underline{a_\eta}$$

$$\frac{a_\mu}{a+d}, \frac{a_\nu}{a+d}, \frac{a_\eta}{a+d} \Rightarrow (a+d)' = (a+d)(a+d)$$

(سوال ۷)

$$a' + 9d' + 4ad = a' + 9d' + 4ad \Rightarrow 4d' = 4ad \Rightarrow a = d$$

$$a_1 = d = \frac{1}{1.9} \Rightarrow a_\mu = a+d = \frac{1}{1.9}, a_\nu = 1, a_\eta = 1.9$$

$$\frac{1}{1.9} \times \frac{1}{1.9}, 1, 1.9 \Rightarrow q = 1.9 \Rightarrow a_1 = aq = \frac{1}{1.9} \times 1.9 = 1$$

$$1.9d' - 1.9ad = 0 \Rightarrow 1.9d(d - a_1) = 0 \Rightarrow \frac{a_1}{1.9} = d \Rightarrow d = 0 \Rightarrow a_\mu = a_\nu = a_\eta = 1.9$$

صورتی تفریق

$$\underline{1.9a_\mu}, \underline{1.9a_\nu}, \underline{a_\eta}$$

$$\frac{1.9a_\mu}{1.9a_\eta}, \frac{1.9a_\nu}{1.9a_\eta}, \frac{a_\eta}{a_\eta} \Rightarrow 1.9b = a + c \Rightarrow 1.9a_\eta = 1.9a_\eta + a_\eta$$

(سوال ۸)

$$1.9a_\eta = a_\eta(1.9 + q') \Rightarrow 1.9q = 1.9 + q' \Rightarrow q' - 1.9q + 1.9 = 0 \Rightarrow (q-1)(q-1.9) = 0$$

$$q = 1.9, q = 1$$

صورتی تفریق

$$\underline{a_\mu}, \underline{a_\nu}, \underline{a_\eta}$$

(سوال ۹)

$$\frac{a_\mu}{a+\frac{1}{1.9}d}, \frac{a_\nu}{a+\frac{1}{1.9}d}, \frac{a_\eta}{a+\frac{1}{1.9}d} \Rightarrow b' = ac \Rightarrow (a-\frac{1}{1.9})' = (a-\frac{1}{1.9})(a-1.9)$$

$$a' + \frac{1.9}{14} - \frac{1}{1.9}a = a' + \frac{1}{1.9} - \frac{1.9}{14}a$$

$$\frac{1.9}{14} = -\frac{1}{1.9}a \Rightarrow a = -\frac{1.9^2}{14}$$

$$\frac{1.9}{14} = -\frac{1}{1.9}a \Rightarrow a = -\frac{1.9^2}{14} \Rightarrow a_\mu = a_\nu = a_\eta = -\frac{1.9^2}{14}$$

$$q = \frac{1.9}{1.9}$$

$$\frac{1.9}{14} + \frac{1.9}{14} + \frac{1.9}{14} = 1.9 \Rightarrow a + a_\mu + a_\nu = 1.9 \Rightarrow a + a_\mu + a_\nu = 1.9$$

$$\frac{1.9}{14} + \frac{1.9}{14} + \frac{1.9}{14} = 1.9 \Rightarrow a + a_\mu + a_\nu = 1.9$$

(سوال ۱۰)