

تلفيف ١٥

$a \quad aq \quad aq^2$
 $a^2 q^2 = 9\epsilon$
 $aq = \epsilon$
 $a + aqq = 14$
 $a + \epsilon q = 14$
 $q(14 - \epsilon q) = \epsilon \Rightarrow \epsilon q + 14q + \epsilon = 0 \Rightarrow \Delta = 14^2 - 9\epsilon = 121$
 $\frac{14 \pm \sqrt{121}}{2} = \begin{cases} 1 \\ \frac{1}{\epsilon} \end{cases} \checkmark$

$a^2 q^2 = 14$
 $a = 14 - \epsilon q$

$(1, 14)$
 (2)

$\frac{a_2}{a_1} = \frac{a_2}{a_1} \Rightarrow \frac{21^2 - 1}{21^2} = \frac{21^2}{21^2 + \epsilon} \Rightarrow 21^2 + 21^2 - 1 = 21^2$
 $21^2 - 1 = 0 \Rightarrow \Delta = 0 + 9\epsilon = 9\epsilon$
 $\frac{0 \pm \sqrt{9\epsilon}}{\epsilon} = \begin{cases} 1 \\ -1 \end{cases}$
 $1, \epsilon, 2 \checkmark \quad q = \frac{1}{2}$
 $1, -\epsilon, 2 \times$
 $1\left(\frac{1 - \frac{1}{14}}{1 - \frac{1}{2}}\right) = 1\left(\frac{\frac{13}{14}}{\frac{1}{2}}\right) = 1 \times \frac{13}{7} = \frac{13}{7}$

(2)

$2\epsilon^2(1 + q + q^2 + q^3 + q^4) = 2\epsilon^2 + 2\epsilon^2 q + 2\epsilon^2 q^2 + 2\epsilon^2 q^3 + 2\epsilon^2 q^4$
 $2\epsilon^2(1 + q + q^2 + q^3 + q^4) = 2\epsilon^2 \times \frac{121}{11} = \frac{242\epsilon^2}{11} = 22\epsilon^2 \checkmark$

(2)

$a, a + rd, a + 2d$
 $a + rd = 32, a = A$
 $a = 1, a + 2d = 9\epsilon$
 $aq^2 = 1$
 $A + B = 1 + 32, a = \boxed{33, a}$

a, aq^2, aq^4
 $aq^2 = 1$
 $q = \sqrt{9\epsilon} = 3$
 $q = -2$
 $B = -1 \rightarrow A + B = 32, a$

$(1, 32)$

$-2\epsilon - \left(-\frac{9\omega}{\epsilon}\right) = \frac{1}{\epsilon}$
 $121, \dots, \frac{1}{a_1} \Rightarrow q = \boxed{\frac{1}{2}} \checkmark$
 $t_{1,1} = -2\epsilon + 100 \times \frac{1}{\epsilon} = 1$

(2)

$$a+rd, a+sd, a+nd \quad (a+sd)^r = (a+rd)(a+nd)$$

$$\begin{matrix} \times q & \times q \\ \hline \end{matrix}$$

$$a^r + rda + sda = a^r + rda + nda$$

$$rd^r + rad = 0 \quad \Delta = \varepsilon - 0 = \varepsilon$$

$$\frac{-r \pm \sqrt{r^2 - 4\varepsilon}}{2\varepsilon} = \begin{cases} 0 \\ -\frac{1}{10} \end{cases} \text{ وقت!}$$

$$\boxed{d = -\frac{1}{10}} \quad \boxed{d = 0} \checkmark$$

$$a+d, a+rd, a+vd \Rightarrow ra + \varepsilon a + na$$

$$(a+rd)^r = (a+d)(a+vd)$$

$$a^r + rad + rd^r = a^r + ada + vda$$

$$rd^r = rad \quad d^r = ad \quad a = d$$

$$\frac{1}{\varepsilon} \left(\frac{r^{10} - 1}{r - 1} \right) = \frac{1}{\varepsilon} \cdot 10r^9 = \frac{10r^9}{\varepsilon}$$

$$q = 2 \checkmark$$

$$a_{10} = aq^9 = \frac{1}{r} \times 2^9 = 128$$

سوال چله دهم روم خواد!

$$ra q, ra q^r, a q^n$$

$$\varepsilon a q^r = ra q + a q^n$$

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

$$q = \begin{cases} 1 \\ \sqrt{r} \end{cases} \checkmark$$

$$n-1, \frac{1}{\varepsilon} + n, n + \frac{a}{\varepsilon} \longrightarrow -\frac{r}{\varepsilon}, -\frac{r}{\varepsilon}, -\frac{1}{\varepsilon}$$

$$\frac{1}{14} + \frac{1}{r} n + n^r = n^r + \frac{1}{\varepsilon} n - \frac{a}{\varepsilon}$$

$$\frac{r}{14} + \frac{n}{\varepsilon} = 0 \quad \frac{n}{\varepsilon} = -\frac{r}{14\varepsilon} \quad n = -\frac{r}{14}$$

$$q = \frac{-\frac{r}{\varepsilon}}{\frac{-r}{\varepsilon}} = \frac{a}{\varepsilon} \checkmark$$

$$a, a+d, a+qd$$

$$a^r + rad + d^r = a^r + qad$$

$$rd = vad$$

$$d = va$$

$$a + a + va + a + qra = vr$$

$$vra = vr \quad a = 1$$

$$\boxed{d = v} \checkmark$$

حالت دوم (بنا نه ثابت) $\rightarrow q = 1$ $\boxed{d = 0}$