

$\left. \begin{aligned} \frac{1}{q} + 2q + 2q^2 + 1 \\ 2 \cdot 2^2 + 2 \cdot 2^3 + 2 \cdot 2^4 + 2 \end{aligned} \right\} \Rightarrow 1^2 + q + 2q^2 + 21q \Rightarrow 1^2 q^2 - 17q + 11 = 0$ $\Delta = 289 - 44 = 245 = 5 \cdot 49 = 7^2 \cdot 5$ $q = \frac{17 \pm 7\sqrt{5}}{2} = 0$ $q = \frac{17 - 7\sqrt{5}}{2} = \left(\frac{1}{2}\right)^2$	۱
$2x^2 + 2x^3 - \Lambda = 12x^2 \Rightarrow x^3 - 10x^2 - \Lambda = 0 \Rightarrow x = 10 \Rightarrow x = 2$ $\Lambda = 10^3 - 10^4 = -9000$ $\Lambda = 10^3 - 10^4 = -9000$	۲
$14q + q^2 + q^3 + q^4 = \frac{121}{\Lambda}, \Lambda = 243$ $14q + q^2 + q^3 + q^4 = \frac{121}{\Lambda} \Rightarrow 14q + q^2 + q^3 + q^4 = \frac{121}{243}$	۳
$A = \frac{4^x + 1}{2} = 37, 8$ $B^2 = 4^x \times 1 \Rightarrow B = \Lambda \rightarrow \text{منفی می تواند باشد} \rightarrow 1 < B < 4$ $\Rightarrow B + A = 40, 8$	۴
$b_n = -25, -\frac{90}{4}, \dots \quad a_n = 12\Lambda, \dots$ $b_n = -25 + (n-1) \cdot \frac{1}{4} \quad a_n = 2^x q^{n-1}$ $b_{1.1} = a_{1.1} \Rightarrow -25 + 25 = 2^x q^0 \Rightarrow 2^x = q^0 \Rightarrow q = \frac{1}{2}$	۵

$$(a+rd)(a+rd) = (a+rd)^T \Rightarrow a^T + 1 \cdot a d + 1 \cdot d^T = a^T + 1 \cdot r a d + r d^T + r a d + r d^T \Rightarrow a d + 1 \cdot d^T \Rightarrow d = \frac{-a}{1}$$

$$(a+rd)(a+rd) = (a+rd)^T \Rightarrow r a d + r d^T \Rightarrow a = d$$

$$q = \frac{b_r}{b_r} = \frac{rd}{rd} = 1 \Rightarrow b_v = \frac{1}{r} r^q \text{ or } N = 1 \text{ or } \infty$$

$$r a q + r a q^T = r a q^T \Rightarrow q = 1 + \sqrt{r}, q = 1 - \sqrt{r}$$

$$a_{1r} = \frac{0}{r} \quad a_{1r} = \frac{1}{2} \quad a_{1r} = -1 \Rightarrow (a + \frac{0}{2})(n-1) = (n + \frac{1}{2})^r$$

$$\Rightarrow \frac{-n}{r} - \frac{n}{14} \Rightarrow \frac{r-1}{2} \Rightarrow -\frac{r}{2} = 0, \frac{r-1}{2} \Rightarrow q = \frac{5}{2}$$

$$\left. \begin{array}{l} r a + 1 \cdot d = \sqrt{r} \\ a q^T = a + d \end{array} \right\} \Rightarrow 1 + q^T + q^T = \sqrt{r} \Rightarrow q = r$$

$$\Rightarrow d = \sqrt{r}$$