

۱۹,۲۵

مرتب تر بنویس!

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$$\frac{a}{q} \times aq \times a = 4r = a^3 \Rightarrow a = 4$$

$$r + rq + \frac{r}{q} = 11 \quad \frac{rq^2 + r}{q} = 11 \quad rq^2 + r = 11q$$

$$q = \frac{1}{r} \quad rq^2 - 11q + r = 0 \quad q = \frac{+11 \pm \sqrt{121 - 4r^2}}{2r} = \frac{11 \pm 10}{2r}$$

$$\Rightarrow q = 4 \text{ or } \frac{1}{4} \quad q \neq \frac{1}{4} \Rightarrow q = 4$$

$$0 < q < 1$$

$$(n^2 - 1)(n^2 + 1) = r n^2 \quad a_1 = 1 \quad q = \frac{1}{4}$$

$$\Rightarrow n^4 + n^2 - 1 = r n^2 \Rightarrow n^4 - n^2 - 1 = 0$$

$$\Rightarrow (n^2 - 1)(n^2 + 1) = 0 \Rightarrow n^2 - 1 = 0 \Rightarrow n = \pm 1$$

$$S_V = \frac{1}{1 - \frac{1}{4}} = \frac{4}{3} = \frac{12V}{n}$$

$$a + aq + aq^2 + aq^3 + aq^4 = S = \frac{11}{11} \times 12V = 12V$$

$$d = \frac{4r - 1}{d + 1} = \frac{4r}{d} = 10/5$$

$$\frac{4r}{1} = q^{d+1} \quad q = \pm 1$$

$$A = a_r = a_v + a_1 = \frac{4r + 1}{r} = 11/4$$

$$A + B = 11/4 + 1 = 15/4 \quad A + B = 11/4 - 1 = 7/4 \Rightarrow q = \frac{1}{4}$$

$$\frac{-94}{r} ; \frac{-90}{r} ; \dots \quad \frac{a_1}{a_1} = q^V = \frac{1}{11} \Rightarrow q = \frac{1}{4}$$

$$d = \frac{1}{r} \quad a_n = \frac{1}{r} n - \frac{9V}{r} \Rightarrow \frac{1}{4} = \frac{1}{4} - \frac{9V}{4} = \frac{r}{4} = 1$$

$$(a+Nd)(a+Nd) = (a+Nd)^N$$

$$a^N + Nd^N + Nd = a^N + Nd + Nd^N \Rightarrow Nd^N = Nd$$

$$\Rightarrow Nd = Na$$

$$\Rightarrow d = -\frac{1}{N}a$$

$$d = 0 = 0a$$

$d \neq 0$

$$(a+d)(a+Nd) = (a+Nd)^N \Rightarrow a^N + Nd + Nd^N = a^N + Nd + Nd^N$$

$$q = \frac{a+Nd}{a+d} = \frac{Na}{Na} = 1$$

$$\Rightarrow Nd = Nd^N \Rightarrow a = d$$

$$a = \frac{1}{N}$$

$$\frac{1}{N} \times N^q = N^V = 1 \times 1$$

$$Naq, Naq^N, aq^N$$

$$aq^N + Naq = Naq^N$$

$$aq(aq^N - Naq + N) = 0$$

$$(q-1)(q-N) = 0$$

$$\Rightarrow q = 1 \text{ یا } q = N$$

$$\frac{1N-1}{1-N} = \frac{a}{N} = q$$

$$a_N = -\frac{1}{N} + \frac{q}{N}$$

$$a_1 = \frac{1}{N}, a_{1N} = -1$$

$$\Rightarrow n = -\frac{N}{N}$$

$$\left(\frac{a}{N} + n\right)(-1+n) = \left(n + \frac{1}{N}\right)^N$$

$$n^N + \frac{1}{N}n - \frac{a}{N} = n^N + \frac{1}{N}n = \frac{1}{1N}$$

$$q = \frac{-1 - \frac{N}{N}}{-1 - \frac{N}{N}} = \frac{-1 - N}{-1 - N} = \frac{a}{N}$$

$$a_1, a_N, a_V$$

این سه را دنباله‌ای هندسی
با قدر نسبت $q' = q^N$ در نظر می‌گیریم

$$a + Na + Nd^N = Nd^N$$

$$\Rightarrow a = 1$$

$$q_1' = q_1^N = \frac{10-N}{N-1} = 1 \Rightarrow q = N$$

$$a_1 = 1$$

$$a_N = 1$$

$$\Rightarrow d = 1-1 = 0$$

حالت دوم
(دنباله‌ای)

$$a = 1, d = 0$$