

$$r^a, \sqrt[r]{r}, r^b \Rightarrow (\sqrt[r]{r})^r = r^a \times r^b \quad (4)$$

$$1r \times r = r^a \times r^b$$

$$r^r = r^a \times r^b$$

$$r^a = r^a \times r^b = r^{a+b} = r^a$$

$$a+b=a$$

$$\frac{a}{r} = r, a$$

$$ar^r = x+1$$

$$ar^r = x$$

$$ar^r = 1-x$$

$$\Rightarrow \frac{x}{x+1} = \frac{1-x}{x} \Rightarrow x^r = 1-x^r$$

$$x^r = \frac{1}{r} \Rightarrow x = \frac{1}{\sqrt[r]{r}}$$

$$\left. \begin{array}{l} a+ar^r = 1r \\ ar^r + ar^r = 1r \end{array} \right\} \Rightarrow \frac{r(1+r)}{1+r^r} = \frac{r}{V} \Rightarrow \frac{r}{1-r+r^r} = \frac{r}{V}$$

$$r=r \Rightarrow a(1+rV) = 1r \Rightarrow a=1$$

$$1r, 9, 2V$$

$$r = \frac{1}{r} \Rightarrow 1r, 9, 2V \Rightarrow (2V) \rightarrow \text{در هر دو حد}$$

$$a+ar+ar^r = 1r$$

$$a \times ar \times ar^r = 1r = a^r r^r$$

$$a = \frac{r}{r}$$

$$(ar)^r = 1r \Rightarrow ar = r$$

$$ar^r = r^r$$

$$\frac{r}{r} + r + r^r = 1r$$

$$r^r - 1r + r = 0$$

$$r=r \Rightarrow 1r, 9, 9$$

$$r = \frac{1}{r} \Rightarrow 9, 9, 1$$

تالیف ۱۶ دنیادری دم دنده B

$$\frac{1}{r} \times r = 1$$

$$\frac{1}{r} \times r = 1$$

$$a_n = \frac{1}{r} \times r^{n-1} \Rightarrow \frac{1}{r} \times r^{n-1}$$

① دنباله هندسی

$$a_1 = ? \Rightarrow \frac{1}{r} \times r^0 = \frac{r}{r}$$

$$\frac{a_{11}}{a_{13}} = \frac{a_9}{a_{17}} = q^8 = \frac{r}{r}$$

$$\frac{1}{r} \times r^6 = \frac{r}{r}$$

در ۱۲۸ جمله این دنباله است!

$$\frac{1}{r} \times r^{n-1} = 128 = r^V$$

$$n=V$$

$$a_9 = 1r \Rightarrow a_9^r = 1r$$

$$a_1 = a_9 \Rightarrow a_9^r = a_9$$

$$a_1 = ? \Rightarrow a_9^r = \frac{r}{r} \times r^8$$

$$a_1 = \frac{r}{r}$$

$$\frac{r}{r} \times r^V \Rightarrow a_1$$

$$a_1 \times a_9 \times a_{17} \times a_{25} \times a_{33} = 1r^5 \quad a \times a_9 \times a_{17} \times a_{25} \times a_{33} = 1r^5$$

$$a_{11} = \frac{r}{r} = ar^r$$

$$\frac{r}{r} \times r^{10} = 1r^5 = r^5$$

$$[a_1 \times a_{11} = ? \Rightarrow a \times a_9^r = a^r r^r = r^r = 9] ar^r = r$$

$$S_1 = r \left(\frac{r^{10} - 1}{r - 1} \right) = r \times \frac{r^{10} - 1}{r - 1} = \frac{r^{10} - 1}{\underline{0.9041}} \quad (1)$$

$$P = r^{10} \times r^{45} = 1.22 \times r^{45}$$

$$d_1 = aq - a = a(q - 1) \quad (2)$$

$$d_r = aq^r - aq^{r-1} = a(q - 1)q^{r-1}$$

$$d_k = aq^{k-1}(q - 1) = a(q - 1)q^{k-1}$$

(3) سلسلة جبرية

$$S_n q = aq + aq^2 + aq^3 + aq^4 + aq^5 + \dots + aq^n \quad (4)$$

$$S_n - S_n q = a_1 - a_1 q^n$$

$$S_n (1 - q) = a_1 (1 - q^n) \Rightarrow S_n = a_1 \frac{(q^n - 1)}{(q - 1)}$$

$$S_n = a_n + a_{n-1} + \dots + a_r + a_1$$

$$r S_n = (a_1 + a_n) + (a_r + a_{n-1}) + \dots + (a_n + a_1)$$

$$r S_n = n (a_1 + a_n)$$

$$S_n = \frac{n}{r} (a_1 + a_n)$$