

$$a_n = \frac{1}{p}, \frac{1}{p^2}, \frac{1}{p^3}, \dots \quad 1 \div \frac{1}{p} = p \Rightarrow q \quad a_n = a_1 \times q^{n-1} \rightarrow a_{10} = \frac{1}{p} \times p^9 = p^1 \quad (1)$$

$$\frac{a_{14}}{a_{1p}} = \frac{a_1 q^{14}}{a_1 q^{1p}} = q^{14-1p} = p^9$$

$$b^p = a^c \rightarrow b^p = p^{10} / p^k \times p^1 = p^{10-k} = p^1 \Rightarrow \left\{ \frac{1}{p} \times p^k = p^1 = p^9 \right\}$$

$$p^k = \frac{1}{p} \times p^9 = p^1$$

$$1/p \rightarrow p^1 \rightarrow a_1 \times q^{n-1} \rightarrow \frac{1}{p} \times p^{n-1} \quad \begin{matrix} n-1=1 \\ n=2 \end{matrix} \quad (2)$$

$$a_1 q^1 = q^1 \quad q^p = 1 \rightarrow q = p \quad a_1 q^9 = p^9$$

$$a_1 = p^1 \quad a_{10} = ? \quad a_1 q^9 = p^9 \quad a_{10} = a_1 q^9 = \frac{p^9}{p^9} = 1 \quad (3)$$

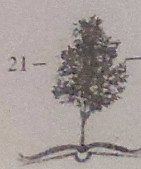
$$a \times a \times a \times a \times a \times a \times a \times a \times a \times a = p^9$$

$$p^n = (a \times a \times a \times a \times a \times a \times a \times a \times a \times a)^n \rightarrow p^n = (a^{10})^n = p^{10n} \rightarrow a^{10n} = p^n \rightarrow a^{10} = p \rightarrow a = p^{1/10}$$

$$p^a \times p^b = p^{a+b} \quad p^a \times p^b = p^c \rightarrow p^a \times p^b = p^c \rightarrow p^{a+b} = p^c \rightarrow a+b = c$$

$$p^a \times p^b = p^c \rightarrow p^a \times p^b = p^c \rightarrow p^{a+b} = p^c \rightarrow a+b = c$$

$$p^a \times p^b = p^c \rightarrow p^a \times p^b = p^c \rightarrow p^{a+b} = p^c \rightarrow a+b = c$$



$$a_{a_{\mu}} = 1 - x \cdot / a_{\nu} = x / a_{\mu} = x + 1$$

(5)

$$a_{\mu} b_{\mu} = b_{\mu} = a_{\mu} \quad x^{\mu} = (1-x)(x+1)$$

$$x^{\mu} = 1 - x^{\mu} \rightarrow x^{\mu} = 1$$

اعاد مسرج

$$x^{\mu} = \frac{1}{\mu} \rightarrow x = \pm \sqrt{\frac{1}{\mu}}$$

$$\frac{1}{\sqrt{\mu}} \times \frac{\sqrt{\mu}}{\sqrt{\mu}} = \frac{\sqrt{\mu}}{\mu} \rightarrow x$$

$$a_1 + a_2 = \mu \rightarrow a_1 + a_1 q^{\mu} = \mu \rightarrow a_1 (1 + q^{\mu}) = \mu$$

$$a_{\mu} + a_{\mu} = \mu \quad a_1 q + a_1 q^{\mu} = \mu \rightarrow a_1 q (1 + q) = \mu$$

6

$$\frac{a_1 (1 + q^{\mu})}{a_1 q (1 + q)} = \frac{\mu}{\mu} \rightarrow \frac{(1 + q)(1 - q + q^{\mu})}{q(1 + q)} = \frac{\mu}{\mu}$$

$$q = \mu, q = \frac{1}{\mu}$$

$$\mu - \mu q + \mu q^{\mu} = \mu q \rightarrow \mu - \mu q + \mu q^{\mu} = 0$$

$$a_1 (1 + q^{\mu}) = \mu \quad a_1 \frac{\mu}{\mu} = 1$$

$$\mu = 1, \mu, q, \mu \rightarrow \mu = 1$$

$$\frac{a}{q} + a + a q = \mu$$

$$\left(\frac{\mu}{q} + \mu + \mu q = \mu \right) \times q \rightarrow \mu + \mu q + \mu q^{\mu} = \mu q$$

$$\frac{a}{q} \times a \times a q = \frac{a^{\mu} = \mu \mu}{a = \mu}$$

$$\mu + \mu q + \mu q^{\mu} = \mu q$$

$$\mu q^{\mu} - \mu q + \mu = 0$$

$$q = \mu, q = \frac{1}{\mu}$$

$$q = \mu \rightarrow 1, \mu, q$$

$$q = \frac{1}{\mu} \rightarrow q, \mu, 1$$



8

$$1, q, q^2, \dots$$

$$q = r$$

$$a_n = aq^{n-1}$$

$$a_{10} = r \times r^9 = r^{10} \rightarrow 1015$$

$$r \times r^9 = r^{10}$$

$$a_1 \left(\frac{q^{10} - 1}{q - 1} \right) \rightarrow 5r \left(\frac{r^{10} - 1}{r - 1} \right) \rightarrow 89 \times 51$$

$\downarrow$
 $r^{10} - 1$

$$\sqrt{(a_1 a_{10})}^{10} \quad a_1 q^9 \rightarrow r \times r^9 = r^{10} \times r^9$$

9

$$a_1 = a, a_2 = ar, a_3 = ar^2, \dots, a_n = ar^{n-1}$$

$$a_1 q - a_1 = a_1 (q - 1) \times q$$

$$a_1 q^2 - a_1 q = a_1 q (q - 1) \times q$$

$$r = r$$

$$a_1 q^n - a_1 q = a_1 q^n (q - 1)$$

10

$$a_n = a_1 + (n - 1)d$$

$$S_n = a_1 + ar + ar^2 + \dots + ar^{n-1}$$

$$S_n = n(a_1 + a_n) \rightarrow \frac{n(a_1 + a_n)}{2}$$

$$S_n = a_1 + a_2 + a_3 + \dots + a_n$$

$$n(a_1 + a_1 + (n - 1)d)$$

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

$$S_n = \frac{n}{2} (2a_1 + (n - 1)d)$$

(C)

$$a, ar, ar^2, ar^3, \dots, ar^{n-1}$$

$$a + ar + ar^2 + ar^3 + \dots + ar^{n-1}$$

$$a + ar + ar^2 + ar^3 + \dots + ar^{n-1}$$

$$a - ar^n \rightarrow S_n(1 - r) \rightarrow a(1 - r^n)$$

$$S_n = \frac{a(1 - r^n)}{1 - r}$$

