

{13, 2, 3, 4, 5, 6, 7, 8, 9}

①

$$u_1 = (n-1)r+1 \Rightarrow n=9 \Rightarrow (9-1)r+1 = 1 \Rightarrow 8r+1 = 1 \Rightarrow 8r = 0 \Rightarrow r = 0$$

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

$$\frac{9r+1}{2} = \frac{1 \times 9}{2} = \frac{9}{2}$$

$$m_1 = 1 \quad / m_r = r \times 1 + 1 = 2 \quad / m_r = r \times r + 1 = 10 \quad / m_r = r \times 10 + 1 = 90 \quad \textcircled{2}$$

$$m_2 = r \times 90 + 1 = 101 \quad \Rightarrow r \times 101 = 100r$$

$$\frac{101 + 100r}{2} = 100r$$

③

$$a_1 = 1 \quad r \times k$$

$$a_1 = r \quad r \times k + 1 \rightarrow 1000 \times 9 \dots$$

$$a_r = 1 + a \quad r \times k + r \rightarrow 1000 \times 9 + 10 \dots$$

$$a_k = r \quad a_9 = r \quad a_9 = 1$$

$$a_k = r \quad a_v = 0$$

$$a_0 = 1 - a \quad a_1 = r + a$$

$$1000 \times 9 = 1 + r + 1 = a + r + r + 1 + a + r + 0 + r + a + 1 + 10$$

$$r + a + r + 10$$

$$a_r + a_0 + a_1 + \dots + a_{r-1} \rightarrow 1010$$

$$10a + (1 + 1 + r + r + \dots + r) = 10a + 10 \rightarrow 10(-r) + 10 = 0$$