

$a_1 + a_r = rA$ $a_r + a_r = rV$ $r = r$ $a_1 = 1 \quad a_r = r \quad a_r = q \quad a_r = rV$ $a_1, \frac{a_r}{r}, \frac{a_r}{q}, a_r$ $\downarrow \quad \downarrow$ $r \quad q$ $\Rightarrow a_r = q$	6
$a_1 + a_r + a_r = rV$ $a_1, a_r, a_r = rV$ $a_1 = 1 \quad a_r = r \quad a_r = q$	7
$a_n = r, q, 1A, \dots$ $S = \frac{a_1(r^n - 1)}{r - 1} = \frac{r \times \omega q o f q}{\frac{r-1}{r}} = \boxed{\omega q o f q}$ $\therefore P_{PB} = r \times r$	8
$1, r, r, A, 1q, \dots$ $\rightarrow q = q'$ $-1, -r, -r, -A$ $a_1, a_1q, a_1q^r \rightarrow a_1 - a_1q, a_1q - a_1q^r$ $q, (1-q), a_1q(1-q)$	9
$a, a+d, a+rd, a+rd, \dots$ $S_n = a + (a+d) + (a+rd) + \dots + (a+(n-1)d)$ $a + (a+d) + (a+rd) + \dots + (a+(n-1)d) = (a+(n-1)d) + (a+(n-1)d)$ $\dots$ $rs = (ra + (n-1)d)n = S \quad S = (ra + (n-1)d)\frac{n}{r}$	10

$$S_n = a + aq + aq^r + \dots + aq^{n-1} \Rightarrow q^n = aq + aq^r + aq^r + \dots + aq^n$$

$$(a + aq + aq^r + \dots + aq^{n-1}) - (aq + aq^r + \dots + aq^n) = a - aq^n$$

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