Suite arithmétique – Suite géométrique

*** Suite arithmétique (s.a) ***	*** Suite géométrique (s.g) ***
$u_{n+1} = u_n + r$	$v_{n+1} = qv_n$
$u_n = u_0 + nr$	$v_n = v_0 q^n$
$u_p = u_s + (p-s)r$	$v_p = v_s q^{p-s}$
$u_2 - u_1 \neq u_1 - u_0 \Rightarrow \quad u \quad non \quad s.a$	$\frac{v_2}{v_1} \neq \frac{v_1}{v_0} \Rightarrow \quad v \quad non \quad s.g$
$\begin{cases} \lim\limits_{n\to+\infty} n = +\infty \\ \lim\limits_{n\to+\infty} \frac{1}{n} = 0 \end{cases}$	$\lim\limits_{n\to+\infty} q^n = \begin{cases} 0 & si \quad -1 < q < 1 \\ 1 & si \quad q = 1 \\ +\infty & si \quad q > 1 \\ n'existe\ pas & si \quad q \leq -1 \end{cases}$
$\bullet \sum_{k=0}^{n} x = \overbrace{x + x + \ldots + x}^{n+1 \quad fois \quad x} = (n+1)x$ $\bullet \sum_{k=0}^{n} k = 1 + 2 + \ldots + n = \frac{n(n+1)}{2}$ $\bullet \sum_{k=0}^{n} u_k = u_0 + u_1 + \ldots + u_n = \frac{(n+1)(u_0 + u_n)}{2}$ $\bullet \sum_{k=p}^{n} u_k = u_p + u_{p+1} + \ldots + u_n = \frac{(n-p+1)(u_p + u_n)}{2}$	$pour \quad tout \quad q \in R^* - \{1\}$ $\bullet \sum_{k=0}^{n} q^k = 1 + q^1 + \ldots + q^n = \frac{1 - q^{n+1}}{1-q}$ $\bullet \sum_{k=p}^{n} q^k = q^p + q^{p+1} + \ldots + q^n = \frac{q^p - q^{n+1}}{1-q}$