

Arithmetic sequence/Series

Recursive formula: $a_n = a_{n-1} + d$

Explicit formula: $a_n = a_1 + (n - 1)d$

Sum: $S_n = (a_1 + a_n) \cdot \frac{n}{2}$

Geometric sequence/Series

Recursive formula: $a_n = a_{n-1} \cdot r$

Explicit formula: $a_n = a_1 \cdot r^{n-1}$

Sum: $S_n = \frac{a_1 - a_1 r^n}{1 - r}$

Infinite sum: if $|r| < 1$ then $S_\infty = \frac{a_1}{1 - r}$