## Arithmetic Sequence

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

## Geometric Sequence

$$a_n = a_1 r^{n-1}$$

## Geometric Series

$$s_n = \frac{a_{\mathbf{1}} - a_{\mathbf{1}} r^n}{\mathbf{1} - r} \text{ where } r \neq \mathbf{1}$$