

## 1   Sum of Arithmetic Series

Let  $(a_i)_{i \geq 0}$  be an arithmetic sequence with common difference  $d$ . Then for some  $n \in \mathbb{N}$ ,

$$\sum_{i=0}^n a_i = \frac{(n+1)(a_0 + a_n)}{2}.$$

*Proof.* [∃ – Real.Arithmetic.sum\\_recursive\\_closed](#)

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