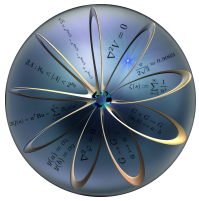

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Cesàro mean

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Definition Let $\{a_n\}_{n=0}^{\infty}$ be a sequence of real (or possibly complex numbers). The **Cesàro mean** of the sequence $\{a_n\}$ is the sequence $\{b_n\}_{n=0}^{\infty}$ with

$$b_n = \frac{1}{n+1} \sum_{i=0}^{n} a_i. \tag{1}$$

0.0.1 Properties

1. A key property of the Cesàro mean is that it has the same limit as the original sequence (when this limit exists). In other words, if $\{a_n\}$ and $\{b_n\}$ are as above, and $a_n \to a$, then $b_n \to a$. In particular, if $\{a_n\}$ converges, then $\{b_n\}$ converges too.