Abstract. The *indecisive infinite sum*

\[ \sum_{n=1}^{\infty} (-1)^{n-1} = 1 - 1 + 1 - 1 + 1 - 1 + \ldots \]

*does not converge* in the usual sense from Calculus to anything at all... Nevertheless, we will see that in a certain *averaging sense*, called *Cesàro convergence*, the *sequence of partial sums* of the above series

\[ (S_N)_{N \in \mathbb{N}} = (1, 0, 1, 0, 1, 0, 1, 0, \ldots) \]

does converge: \( \textbf{to} \ \frac{1}{2} \).

What about *infinite sums* that are even more indecisive than \( \sum_{n=1}^{\infty} (-1)^{n-1} \):

\[ \sum_{n=1}^{\infty} (-1)^{n-1} n \ , \ \sum_{n=0}^{\infty} (-1)^{n} 2^n \ , \ \text{or even} \ \sum_{n=0}^{\infty} (-1)^{n} n! \ \ldots \ ? \]

These series fail to converge in a spectacular fashion, since their partial sums are *unbounded* and *oscillatory*. Yet we will see that we can still *persuade* them to *converge* using other methods, including those of *Borel*. 