



# HARMONIC SERIES

## Why

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## Definition

The *harmonic series* is the series of the sequence  $x_n = 1/n$  for all  $n$ .

**Proposition 1.** *The harmonic series diverges. In particular  $\sum_{k=1}^{\infty} a_k = \infty$ .*<sup>2</sup>

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<sup>1</sup>Future editions will include.

<sup>2</sup>Future editions will include a prerequisite sheet about limits to infinity.



