Interval Length

1   Why

We want to define the length of a subset of real numbers. Toward this end, we define the length of an interval, a special kind of subset of real numbers.

2   Definition

The **length** of an interval is the difference of its endpoints: the larger less the smaller.

3   Notation

Let a, b be real numbers which satisfy the relation $a < b$. The length of (a, b), $[a, b]$ $[a, b)$ and $(a, b]$ are each

$$b - a.$$

For example, the length of the interval $(0, 1)$ is one.