



## Why

Many things in real life are bounded and linear.<sup>1</sup> More importantly, a bounded linear function between two norm spaces is continuous. We will show this later.

## Definition

A *bounded linear transformation* between two norm spaces is a linear function which is bounded. As with linear transformations, we sometimes call bounded linear transformations *bounded linear functions*. Bounded linear functions are sometimes called *bounded operators*, since linear functions are sometimes called operators.

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<sup>1</sup>Future editions will expand on this weak explanation.



