

### 3.11: Variability

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#### Learning Objectives

- To study how much the numbers in a distribution differ from each other

Variability refers to how much the numbers in a distribution differ from each other. The most common measures are presented in "Measures of Variability." The "variability demo" allows you to change the standard deviation of a distribution and view a graph of the changed distribution.

One of the more counter-intuitive facts in introductory statistics is that the formula for variance when computed in a population is biased when applied in a sample. The "Estimating Variance Simulation" shows concretely why this is the case.

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