

Resource Rounding and Estimation

Rounding and estimating

Rounding is an important skill in mathematics. We often round numbers to make sense of them, or to make comparisons and that do not require exact numbers.

To review rounding, watch the following videos:

- <http://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-rounding/v/rounding-whole-numbers-1>
- <http://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-rounding/v/rounding-whole-numbers-2>
- <http://www.khanacademy.org/math/cc-fourth-grade-math/cc-5th-place-value-rounding-topi/cc-4th-rounding/v/rounding-whole-numbers-3>

In this course, we talk about the following different types of **estimation**:

- **Educated guess:** One type of estimation might be called an “educated guess” about something that has not been measured exactly. One of the lessons uses estimations of the world population. This quantity cannot be measured exactly—it would be impossible to count how many people live on Earth at any given time. Scientists can use good data and mathematical techniques to estimate the population, but it will always be an estimate.
- **Convenient estimation:** Sometimes estimations are used when it is inconvenient or not worthwhile to make an exact count. Imagine that you need to know how much paint to buy to paint the baseboard trim in your house. (The baseboard trim is the piece of wood that follows along the bottom of the walls.) You need to know the length of the baseboard. You could measure the length of each wall to the nearest $\frac{1}{8}$ inch and carefully subtract the width of halls and doors. It would be much quicker and just as effective to measure to the nearest foot or half foot. If you were cutting a piece of baseboard to go along the floor, however, you would want an exact measurement.
- **Estimated calculation:** This usually involves rounding numbers to make calculations simpler. One of the lessons focuses on estimating and calculating percentages, and throughout this course, percentages are used in many contexts. One of the most important skills that you will develop is understanding and being comfortable working with percentages in a variety of situations.

