



5.2 billion **Math 1030 #6a** 1 cm = 50 mi

Putting Numbers in Perspective

Estimation and Comparison

4.5×10^{12}

3×10^8

Perspective Through Estimation - A big picture understanding of a quantity. It is not intended to be super accurate, the attention is not in the details, but with the idea.

An Order of Magnitude Estimate - Specifies a broad range of values.

EX 1: Estimate the following quantities.

a) the number of steps in an average day.

b) the number of hours per month you spend listening to music.

Perspective Through Comparisons

How does an unfamiliar number (or unit) compare to a more familiar number (or unit)? The answer to this question often gives meaning to a problem or description of a quantity.

EX 2: How many gallons of oil are required to supply the electrical energy needs of an average home for a month?

EX 3: Suppose that we could somehow capture all the energy released by the sun for just 1 second. Would this energy be enough to supply U.S. energy needs for a year?