

What Is a Ratio?

Imagine that you are planning a science experiment for your class and you want to make sure you have enough beakers for everyone. What do you do? Well, you could simply count the total number of beakers you have and compare it with the number of students in your class. You may not have realized it, but you just made a ratio! A **ratio** is a comparison between numbers, and can be written in words (3 to 7), as a fraction ($\frac{3}{7}$), or with a colon (3:7).

PROCEDURE: To find the ratio between two quantities, show the two quantities as a fraction, and then reduce. The result is the ratio.

SAMPLE PROBLEM: Find the ratio of thermometers to students if you have 36 thermometers and 48 students in your class.

Step 1: Make the ratio. $\frac{36 \text{ thermometers}}{48 \text{ students}}$

Step 2: Reduce. $\frac{36}{48} = \frac{36 \div 12}{48 \div 12} = \frac{3}{4}$

The ratio of thermometers to students is 3 to 4, $\frac{3}{4}$, or 3:4.

Wildflower Research Results

Field	Average number of flowers (per 10 m ²)	Number of species	Species currently flowering
1	51	12	9
2	17	11	7
3	22	22	20

Analyze Your Data!

1. What is the ratio between the currently flowering species and the total number of species of flowers in Field 1?

2. What is the ratio between the number of species currently flowering in Field 1 and Field 2 and the number of species currently flowering in Field 3?

3. What is the ratio between the number of species currently flowering and the total number of flowers in all three fields?
