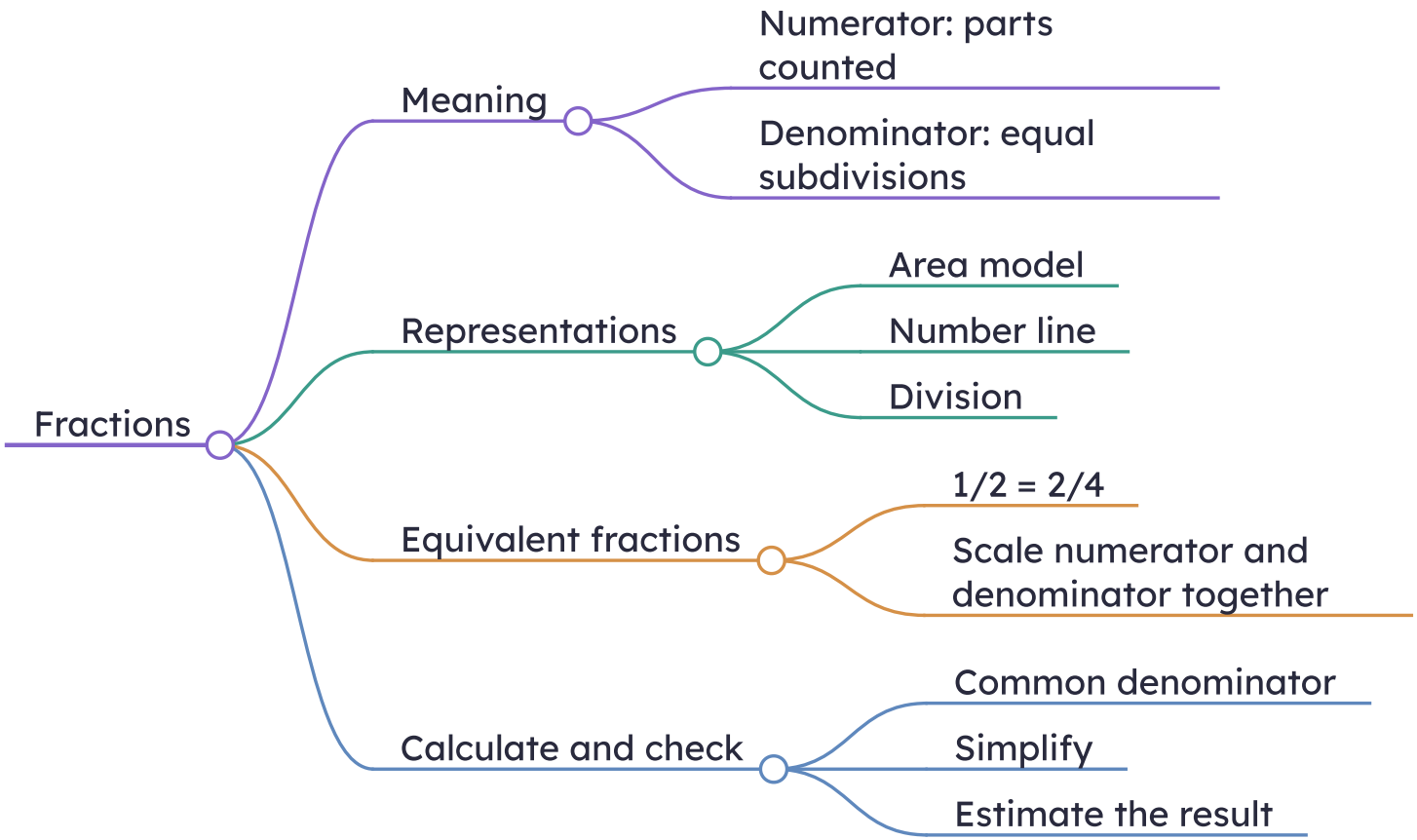
Fractions

Connect equal parts, number lines, equivalent fractions, and calculation.



Read one branch at a time. Then cover the details and explain them in your own words.

Understand the topic

A fraction a/b can represent a parts when a whole is divided into b equal parts, with b not zero. It can also represent division or a point on a number line. Equivalent fractions express the same value. When comparing parts of objects, check that the wholes are equal in size.

How the map is organized

Establish meaning before operations. Use pictures and a number line to explain why equivalent fractions match.

> **Watch out for this**
> Adding denominators does not add fractions correctly. Use a common denominator.

Try it yourself

Show 1/2 and 2/4 using equal-sized rectangles and a number line. Then explain 1/2 + 1/4 without merely reciting a rule.

Two questions to answer

What is 1/2 + 1/4?

Rewrite 1/2 as 2/4, then add the numerators.

What must the parts in an area model be?

The denominator describes equal subdivisions of a whole.

Sources

openstax.org
https://openstax.org/books/prealgebra-2e/pages/4-1-visualize-fractions

Original practice material compiled by Studera.ai. Explore at studera.ai/en/resources/mind-map-examples.