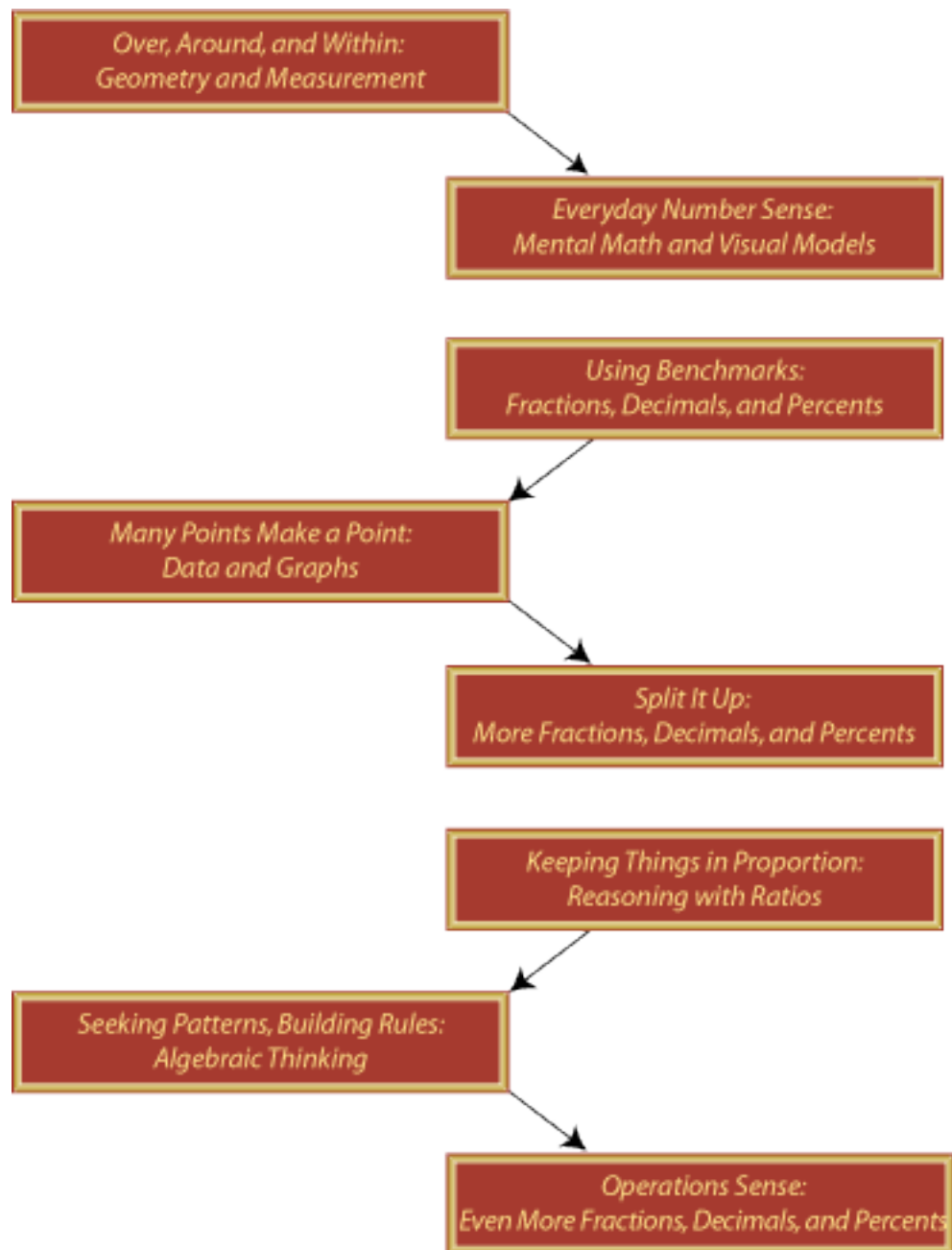


EMPower sequence: Which book do I start with?

The most effective sequence in which the EMPower books can be used with your class will depend on the backgrounds and interests of students. The 8 books are not numbered so teachers can order them according to their class needs; however, the authors suggest specific unit arrangements that will support students' progression through certain concepts.

The authors do not recommend sequencing the units according to the traditional basic math model that begins with whole numbers, follows with fractions, decimals, and percents; data and graphs; algebra; and then geometry. Instead, the authors suggest you integrate the five units that focus on numbers with the units on geometry, data, and algebra. The authors found this integration of topics helped to motivate the adult students in their pilot classes.

Although the units were not specifically designed to build on one another, there are clear connections between some of the units in the series. *Over, Around, and Within: Geometry and Measurement* provides a nice introduction to the program because it focuses on small whole numbers. *Everyday Number Sense: Mental Math and Visual Models* could follow to further develop whole number mental math skills and visual models. *Using Benchmarks: Fractions, Decimals, and Percents* provides the necessary groundwork with fractions, decimals, and percents to describe approximate relationships between data sets in *Many Points Make a Point: Data and Graphs*. And *Split It Up: More Fractions, Decimals, and Percents* continues to expand students' repertoire of familiar fractions, decimals, and percents. *Seeking Patterns, Building Rules: Algebraic Thinking* builds upon the tools and relationships used in *Keeping Things in Proportion: Reasoning with Ratios*; finally, *Operations Sense: Even More Fractions, Decimals, and Percents* introduces more complex fractions and operations in geometric, graphic, and algebraic contexts. The following diagram demonstrates this integrated sequence:



Unit Descriptions

Over, Around, and Within: Geometry and Measurement

Students explore the features and measures of basic shapes. Perimeter and area of two-dimensional shapes and volume of rectangular solids provide the focus.

Everyday Number Sense: Mental Math and Visual Models

Students solve problems and compute with whole numbers using mental math strategies with benchmarks of 1, 10, 100, and 1,000. Number lines, arrays, and diagrams support their conceptual understanding of number relationships and the four operations.

Using Benchmarks: Fractions, Decimals, and Percents

Students use the fractions $\frac{1}{10}$, $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{3}{4}$; the decimals 0.1, 0.5, 0.25, and 0.75; and the percents 50%, 25%, 75%, 100%, and the multiples of 10% as benchmarks with which to describe and compare all part-whole relationships.

Many Points Make a Point: Data and Graphs

Students collect, organize, and represent data using frequency, bar, and circle graphs. They use line graphs to describe change over time. They use benchmark fractions and the three measures of central tendency—mode, median, and mean—to describe sets of data.

Split It Up: More Fractions, Decimals, and Percents

Building on their command of common benchmark fractions, students add thirds, eighths, and hundredths and their decimal and percent equivalents to their repertoire of part-whole relationships.

Keeping Things in Proportion: Reasoning with Ratios

Students use various tools—objects, diagrams, tables, graphs, and equations—to understand proportional and nonproportional relationships.

Seeking Patterns, Building Rules: Algebraic Thinking

Students use a variety of representational tools—diagrams, words, tables, graphs, and equations—to understand linear patterns and functions. They connect the rate of change with the slope of a line and compare linear with nonlinear relationships. They also gain facility with and comprehension of basic algebraic notation.

Operation Sense: Even More Fractions, Decimals, and Percents

Students extend their understanding of the four operations with whole numbers as they puzzle over questions such as “How is it possible that two fractions multiplied might yield a smaller amount than either fraction?” and “What does it mean to divide one-half by six?”