

# Using Fraction Manipulatives

## Why should I use manipulatives?

Manipulatives serve four purposes for tutors and students

- 1) **They engage the senses.** Multi-sensory tools have been shown to dramatically increase understanding and retention. Many students, especially those who had difficulty in school, need multisensory tools to learn effectively.
- 2) **They help students discover concepts.** This is especially true for math concepts. It can be difficult, for example, to explain how  $\frac{2}{4} = \frac{1}{2}$ , but when students physically moves shapes, they can prove it for themselves.
- 3) **They help keep students focused.** Everyone appreciates a little variety. By varying activities, you help your student to stay focused and keep learning.
- 4) **They encourage practice.** Students will often practice more with manipulatives than they will with worksheets.

## What skills can I teach using this kit?

With the manipulatives in this kit, you can teach or your student can practice how to:

- Recognize fractional parts of circles, squares and rectangles
- Understand and recognize equivalent fractions and their pictorial representations
- Order fractions by size
- Understand and recognize fractions greater than 1 and mixed numbers
- Change mixed numbers to improper fractions
- Reduce fractions to simplest terms
- Add fractions
- Subtract fractions
- Multiply fractions
- Divide fractions
- Understand and recognize equivalence between fractions and decimals
- Change fractions to decimals
- Order decimals
- Add, subtract, multiply and divide decimals
- Understand and recognize equivalence between fractions and percentages
- Order percentages
- Add, subtract, multiply and divide percentages

## **Are there any other tools to help me teach my student?**

### **What's in the kit?**

This kit contains 16 different manipulatives to help teach fractions. There are 6 different types of manipulatives in the box.

### **Fraction Shape Sets**

Fraction squares and fraction circles show how a basic shape can be subdivided into various fractional parts. These sets are excellent for introducing the concept of fractions and visually proving equivalence.

- Visible Fraction Apparatus
- Fraction Squares
- Overhead Fraction Circles
- Fraction Circles

### **Matching Card Sets**

Matching Cards show fractional parts of a circle, square or rectangle in two different colors. These cards are excellent for practice in recognizing fractions and their meaning and for understanding equivalence.

- Equivalent Fractions Matching Cards 1
- Equivalent Fractions Matching Cards 2
- Equivalent Fractions Matching Cards 3
- Equivalence Playing Cards

### **Fraction Dice**

Fraction dice have different fractions on each side. They can be rolled to play a variety of games or to set a value to turn into a decimal or percentage.

### **Rubber Stamps**

Rubber Stamps can be used to make different work sheets or stamped on cards for students to take home and study.

### **Matching Tiles**

Matching tiles works on the domino principle: a value on one tile is matched with an equivalent value on another tile. Different tile sets have values represented as fractions, percentages, decimals and pictorial representations.

- Equivalent Fraction Shapes
- Percentage Fraction Shapes
- Fraction Dominoes
- Decimal-Fraction Dominoes
- Equivalence Dominoes
- Fraction-Lowest Term