

Really Good Stuff® Activity Guide

Fractions in Action Poster Set

Congratulations on your purchase of the Really Good Stuff® 8-in-1 Poster Set!

Inside this Really Good Stuff® set you'll find:

- One 19" x 24" laminated poster
- Ten 9½" x 13" mini posters

This unique format allows you to display your new poster set in a variety of ways:

- Display posters one at a time. When mini posters are not being displayed, simply store them in the large poster, behind the mini poster on which you are focusing. (See **A** below)
- Place the mini poster that you are using in your current lesson in the center of the large poster, and display

mini posters that have already been taught around the outside of the large poster. (See **B** below)

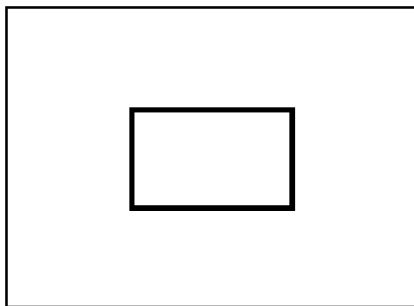
- Display all of the mini posters at one time, placing one mini poster inside the large poster and the others around the outside of it. (See **C** below)

Our versatile design allows you to insert your mini posters into the main poster in two different ways:

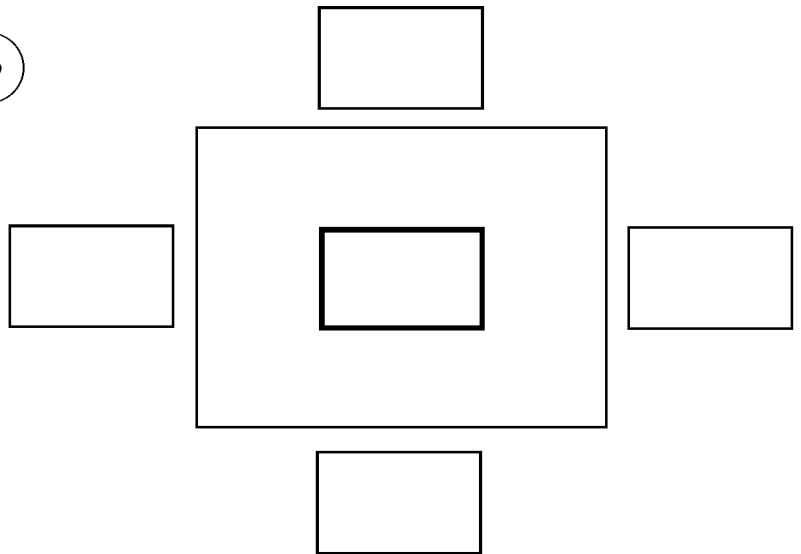
- Tuck the mini posters into the slits at each corner of the display area.
- Tuck the mini posters into the tabs at the top and bottom of the display area.

Enjoy your new 8-in-1 poster set!

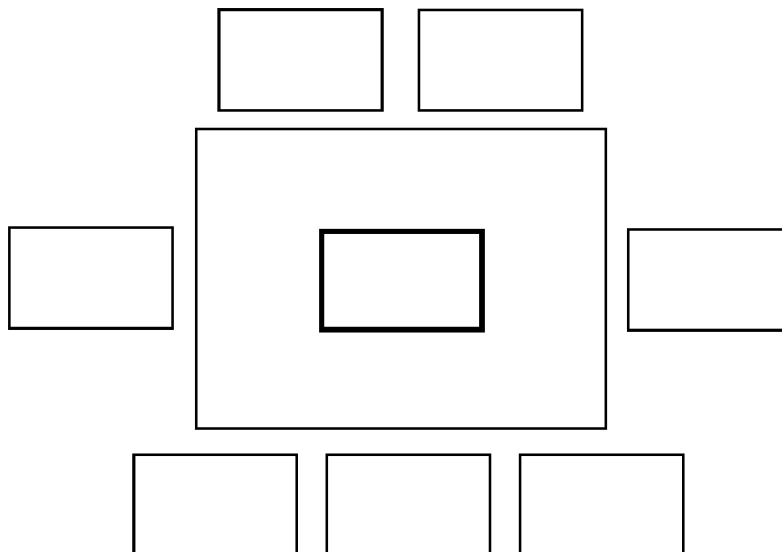
A



B



C



Multiplying and Dividing Fractions

Multiplying: Multiply the numerators to find the answer's numerator. Then multiply the denominators to find the answer's denominator.

$$\frac{2}{3} \times \frac{5}{8} = \frac{2 \times 5 = 10}{3 \times 8 = 24}$$

Simplify if necessary.

$$\frac{10 \div 2}{24 \div 2} = \frac{5}{12}$$

Dividing: Flip the second fraction upside down; this is called its reciprocal fraction. Then multiply the fractions.

$$\frac{5}{8} \div \frac{3}{4} = \frac{5}{8} \text{ becomes } \frac{4}{3} \quad \frac{5 \times 4}{8 \times 3} = \frac{20}{24}$$

Simplify if necessary.

$$\frac{20 \div 4}{24 \div 4} = \frac{5}{6}$$

Finding the Greatest Common Factor of a Fraction

The **Greatest Common Factor (GCF)** of a fraction is the largest number that divides evenly into both the numerator and the denominator.

Finding the GCF: Make a list of the factors of the numerator and another list of the factors of the denominator. Find the largest number that is the same in both lists; this is the **Greatest Common Factor**.

$$\frac{16}{24}$$

Factors of 16: 1, 2, 4, **8**, 16

Factors of 24: 1, 2, 3, 4, 6, **8**, 12, 24

The **Greatest Common Factor** of 16 and 24 is **8**.

Sometimes the only factor that a set of numbers has in common is 1. Then the **GCF** is **1**.

$$\frac{5}{12}$$

Factors of 5: **1**, 5

Factors of 12: **1**, 2, 3, 4, 6, 12

The **Greatest Common Factor** of 5 and 12 is **1**.

Adding, Subtracting, and Comparing Fractions with Unlike Denominators

To **add**, **subtract**, or **compare fractions**, the denominators must be the same. To make them the same, find the **Least Common Denominator (LCD)**, the smallest whole number that is divisible by each of the denominators.

To find the **LCD**: List some **multiples** of each **denominator** (multiply each **denominator** by 2, 3, 4, 5, etc.). Find the smallest **multiple** that is the same in all lists.

$$\frac{2}{3} + \frac{1}{5} =$$

Multiples of 3:
3, 6, 9, 12, **15**

Multiples of 5:
5, 10, **15**

Then: Change each fraction to an equivalent fraction that has the **LCD** as the **denominator**.

$$\frac{2}{3} \times \frac{5}{5} = \frac{10}{15}$$

$$\frac{1}{5} \times \frac{3}{3} = \frac{3}{15}$$

Then add, subtract, or compare the fractions with like denominators. $\frac{10}{15} + \frac{3}{15} = \frac{13}{15}$

Simplify if necessary.

Changing Mixed Numbers to Improper Fractions

A **mixed number** consists of a whole number and a fraction.

An **improper fraction** has a numerator that is larger than the denominator.

Changing a
mixed number
to an
improper fraction:

Multiply the **whole number** by the **denominator**,
then add the **numerator** to the total. This new
number becomes the **numerator** of the answer.
The **denominator** stays the same.

$$7\frac{2}{3}$$

$$7 \times 3 + 2 = 23$$

$$\frac{23}{3} \text{ is the improper fraction}$$

$$2\frac{5}{8}$$

$$2 \times 8 + 5 = 21$$

$$\frac{21}{8} \text{ is the improper fraction}$$

Adding, Subtracting, and Comparing Fractions with Like Denominators

Adding and Subtracting: Add or subtract the **numerators**. The **denominator** stays the same.

Adding: $\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$

Subtracting: $\frac{8}{9} - \frac{2}{9} = \frac{6}{9}$ Simplify the answer if necessary. $\frac{6 \div 3}{9 \div 3} = \frac{2}{3}$

Comparing: Compare the numerators. The denominator stays the same.

$$\frac{3}{14} < \frac{5}{14}$$

$$\frac{15}{16} > \frac{9}{16}$$

Simplifying Fractions

Simplifying a fraction means rewriting it in its smallest terms. The **simplest form** of a fraction has a numerator and denominator that cannot be divided by a common factor other than 1.

Simplifying a fraction: Find the **Greatest Common Factor (GCF)** of the numerator and the denominator. Then divide the numerator and the denominator by the **GCF**.

$\frac{10}{15}$ Factors of 10: 1, 2, **5**, 10
Factors of 15: 1, 3, **5**, 15

The **Greatest Common Factor** of 10 and 15 is **5**.

$$\frac{10}{15} \div \frac{5}{5} = \frac{2}{3}$$

The **simplest form** of $\frac{10}{15}$ is $\frac{2}{3}$.

If a fraction cannot be divided by a common factor other than 1, the fraction is already in simplest form.

$\frac{3}{10}$ Factors of 3: **1**, 3
Factors of 10: **1**, 2, 5, 10

The **Greatest Common Factor** of 3 and 10 is **1**. $\frac{3}{10}$ is in **simplest form**.

Changing Improper Fractions to Mixed Numbers

An **improper fraction** has a numerator that is larger than the denominator.

A **mixed number** consists of a whole number and a fraction.

Changing an
improper fraction
to a
mixed number:

Divide the numerator by the denominator. The **quotient** becomes the **whole number** in your mixed number. The **remainder** becomes the **numerator** of the fraction. The **denominator** stays the same.

$$\frac{16}{5} \quad 16 \div 5 = 3r1 \quad 3\frac{1}{5}$$

If there is no remainder, then your improper fraction is rewritten as a whole number only.

$$\frac{20}{4} \quad 20 \div 4 = 5r0 \quad 5$$

Finding Equivalent Fractions

Equivalent fractions are fractions that have the same value. This means that each fraction represents the same part of a whole.

Finding equivalent fractions: Multiply the numerator and denominator by 2, 3, 4, etc.

equivalent fractions of $\frac{15}{20}$ $\frac{15 \times 2 = 30}{20 \times 2 = 40}$ $\frac{15 \times 3 = 45}{20 \times 3 = 60}$ $\frac{15 \times 4 = 60}{20 \times 4 = 80}$

To find other **equivalent fractions**, simplify the fraction and then multiply the numerator and denominator of the **simplified fractions** by 2, 3, 4, etc.

$$\frac{15}{20} \div \frac{5}{5} = \frac{3}{4} \quad \frac{3 \times 2 = 6}{4 \times 2 = 8} \quad \frac{3 \times 3 = 9}{4 \times 3 = 12} \quad \frac{3 \times 4 = 12}{4 \times 4 = 16}$$

You might notice that the numerators and denominators of equivalent fractions follow a pattern. Finding the pattern is one way to make sure that a list of equivalent fractions is correct.