



Add, Subtract, and Multiply Fractions

Let's practice solving problems involving fractions.

Warm-up

Number Talk: Fluency and Fractions

Find the value of each expression mentally.

$$\bullet \ 5 \times \frac{10}{5}$$

$$\bullet \ 9 \times \frac{6}{3}$$

$$\bullet \ 8 \times \frac{11}{4}$$

$$\bullet \ 6 \times \frac{12}{10}$$

Activity 1

Let's Make Head Wraps!



Jada and Lin see a picture of head wraps made of African wax-print fabric. They decide to make their own head wraps.

1. Jada stitches together 5 pieces of fabric. Each piece has a length of $\frac{2}{6}$ yard. Write an equation to show the total length of fabric Jada uses for her head wrap.
2. Lin stitches together 3 pieces of fabric. Each piece has a length of $\frac{2}{3}$ yard. Write an equation to show the total length of fabric Lin uses for her head wrap.
3. Who uses more fabric? Explain or show your reasoning.

Activity 2

Make Two Yards of Fabric

Jada's and Lin's moms teach the fourth-grade class how to combine and use fabric pieces for head wraps. Here is the length of each piece of fabric.

 $\frac{2}{6}$ yard $\frac{2}{6}$ yard $\frac{2}{6}$ yard $\frac{11}{10}$ yard $1\frac{2}{5}$ yards $\frac{9}{10}$ yard $\frac{2}{6}$ yard $\frac{6}{12}$ yard $\frac{3}{6}$ yard $\frac{2}{6}$ yard $\frac{2}{6}$ yard $\frac{12}{12}$ yard $\frac{2}{6}$ yard $\frac{3}{5}$ yard $\frac{2}{6}$ yard

Find as many different combinations of fabric that would have a length of 2 yards. Each piece of fabric can be used only one time. Write an equation for each combination.

Activity 3

Play by the Rules

1. Here are 4 fractions:

$$\frac{15}{12}$$

$$\frac{7}{12}$$

$$\frac{21}{12}$$

$$\frac{18}{12}$$

a. What is the sum of all the fractions?

b. Select 2 of the fractions with a difference that is less than $\frac{1}{3}$. Explain or show your reasoning.

c. Select 2 of the fractions with a sum greater than 3. Explain or show your reasoning.

2. Here are 4 new fractions:

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

$$\frac{8}{12}$$

$$\frac{3}{12}$$

$$\frac{2}{12}$$

Use the fractions to make the value 1. Follow these rules.

- Use addition, subtraction, or both.
- Use all four fractions.
- Use each fraction only one time.

3. Use these fractions and the same rules to make the value 1.

$$\frac{15}{10}$$

$$\frac{13}{100}$$

$$\frac{53}{100}$$

$$\frac{9}{10}$$