

Lesson 1: 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.

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

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

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

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

1.1: Let's Make Head Wraps!



Jada and Lin saw a picture of head wraps made of African wax print fabric and would like to make their own.

1. Jada stitches together 5 pieces of fabric that each have a length of $\frac{2}{6}$ yard. Write an equation to show the total length of fabric Jada used.
2. Lin stitches together 3 pieces of fabric that are each $\frac{2}{3}$ yard long. Write an equation to show the total length of fabric Lin used.
3. Who used more fabric? Explain or show your reasoning.

1.2: Make 2 Yards of Fabric

Jada and Lin's moms taught the fourth-grade class how to combine and use fabric pieces for head wraps. The lengths of each piece of fabric are listed here.

$$\frac{2}{6} \text{ yard}$$

$$\frac{2}{6} \text{ yard}$$

$$\frac{2}{6} \text{ yard}$$

$$\frac{11}{10} \text{ yard}$$

$$1\frac{2}{5} \text{ yards}$$

$$\frac{9}{10} \text{ yard}$$

$$\frac{2}{6} \text{ yard}$$

$$\frac{6}{12} \text{ yard}$$

$$\frac{3}{6} \text{ yard}$$

$$\frac{2}{6} \text{ yard}$$

$$\frac{2}{6} \text{ yard}$$

$$\frac{12}{12} \text{ yard}$$

$$\frac{2}{6} \text{ yard}$$

$$\frac{3}{5} \text{ yard}$$

$$\frac{2}{6} \text{ yard}$$

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

1.3: Play by the Rules

1. Here are four fractions: $\frac{15}{12}$ $\frac{7}{12}$ $\frac{21}{12}$ $\frac{18}{12}$

- What is the sum of all the fractions?
- Select two fractions with a difference that is less than $\frac{1}{3}$. Show or explain your reasoning.
- Select two fractions with a sum greater than 3. Show or explain your reasoning.

2. Here are four new fractions: $\frac{5}{12}$ $\frac{8}{12}$ $\frac{3}{12}$ $\frac{2}{12}$

Use them to make the value 1, following these rules:

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

3. Try to make the value of 1 again using the following fractions and the same rules.

$\frac{15}{10}$ $\frac{13}{100}$ $\frac{53}{100}$ $\frac{9}{10}$