Unit 3, Lesson 19

Fraction Games

Let's multiply and divide with fractions.

Warm-up

Estimation Exploration: Multiply Fractions

$$28 \times 2\frac{8}{9}$$

Record an estimate that is:

too low	about right	too high

Activity 1

Greatest Product or Quotient

For each expression, find the greatest product or quotient you can make with the numbers 1, 2, 3, 4, 5, and 6. You can only write each number once in each expression. You do not need to use all the numbers. Explain or show your reasoning.

1. $\frac{\square}{\square} \times \frac{\square}{\square}$

2. $\square \div \frac{1}{\square}$

3. $\frac{1}{\square} \div \square$

Activity 2

Smallest Product or Quotient

For each expression, find the smallest product or quotient you can make with the numbers 1, 2, 3, 4, 5, and 6. You can only write each number once in each expression. You do not need to use all the numbers. Explain or show your reasoning.

1. $\frac{\square}{\square} \times \frac{\square}{\square}$

2. $\square \div \frac{1}{\square}$

3. $\frac{1}{\square} \div \square$

Section C Summary

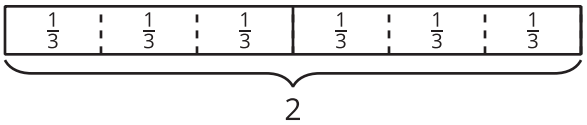
We used the relationship between multiplication and division to write both multiplication and division equations to represent the same situation.

Example:

There are 2 pounds of beef in the package. Each burger uses $\frac{1}{4}$ pound. How many burgers does the package make? We can write $2 \div \frac{1}{4} = 8$ and $8 \times \frac{1}{4} = 2$ to represent the situation.

We also learned to write multiplication and division equations to represent the same diagram.

Example**:**



We can write $6 \times \frac{1}{3} = 2$. The diagram shows 6 groups of $\frac{1}{3}$ and the total value is 2. We can also write $2 \div \frac{1}{3} = 6$. The diagram shows that the number of groups of $\frac{1}{3}$ in 2 is 6.