Name: _____ Date: _____

What a Party!

Multiplying and Dividing Fractions and Whole Numbers

Kira wants to give everyone who attended her birthday party something before they leave. Her dad told her she could give each guest part of the food that was left over. Near the end of the party, he wrote down what Kira could give each guest and a question for Kira to answer about the amount each guest would get. Can you help Kira answer the questions?

Since $\frac{2}{3}$ of the cake is left, you can give $\frac{3}{4}$ of the remaining cake to Todd. What part of the entire cake will Todd get?

Since there is $\frac{5}{8}$ of a bag of candy left, you can give $\frac{4}{5}$ of the remaining candy to Irene. What part of the entire bag of candy will Irene get?

Since there is $\frac{9}{10}$ of a bag of nuts left, you can give $\frac{2}{3}$ of the remaining nuts to Tyler. What part of the entire bag of nuts will Tyler get?

Since there is $\frac{5}{6}$ of a bag of popcorn left, you can give $\frac{1}{10}$ of the remaining popcorn to Liza. What part of the entire bag of popcorn will Liza get?

Thinking Cap

Kira showed her answers to her dad. He decided the food should be divided more evenly. So he told Kira to divide the part of each food item he had decided to give each guest equally among all four guests. What part of the original amount of each item will each guest get now?

What a Party!

Topic: Multiplying and Dividing Fractions and Whole Numbers

Objective: To use the calculator to solve problems involving multiplying and dividing fractions and whole numbers.

NCTM Standards: Problem Solving, Computation and Estimation

Multiplying and Dividing Fractions and Whole Numbers

Using the Activity

Students use the calculator in this activity to multiply and divide fractions and whole numbers.

- The sin key can be used to enter fractions.

  Example To figure out what part of cake Todd will get, enter 2 b/c 3 X 3 b/c 4 = $\frac{1}{2}$. So, Todd will get $\frac{1}{2}$ of the entire cake.

You may want to ask students to think about why it is easier to use the calculator to solve these problems than to use paper and pencil. One of the possible answers is that the fraction the calculator gives is already in simplest form.

Assessment Have students multiply the numerators of the fractions in their head, enter the product, press the b/c key, multiply the denominators of the fractions in their head, enter the product, and then press the = key to simplify the fraction. The fraction should be the same as the product obtained earlier.

Answers

Todd: 2 b/c 3 X 3 b/c 4 = $\frac{1}{2}$ of the entire cake

Irene: 5 b/c 8 X 4 b/c 5 = $\frac{1}{2}$ of the entire bag of candy

Tyler: 9 b/c 10 X 2 b/c 3 = $\frac{3}{5}$ of the entire bag of nuts

Liza: 5 b/c 6 X 1 b/c 10 = $\frac{1}{12}$ of the entire bag of popcorn

Thinking Cap

Since there are 4 guests, each of the answers to the original questions will need to be divided by 4.

Answers

Cake: 1 b/c 2 ÷ 4 = $\frac{1}{8}$ of the entire cake

Candy: 1 b/c 2 ÷ 4 = $\frac{1}{8}$ of the entire bag of candy

Nuts: 3 b/c 5 ÷ 4 = $\frac{3}{20}$ of the entire bag of nuts

Cake: 1 b/c 12 ÷ 4 = $\frac{1}{48}$ of the entire bag of popcorn