Names for 100

Math Concepts	Overview
• addition • decimals • subtraction • fractions • multiplication • integers • division **Materials** • TI-15 Explorer™ • **Names for 100** recording sheets • pencils	Students will use the calculator and their understanding of integers, fractions, decimals, and operations to find mathematical expressions that equal 100.

Introduction

1. Discuss situations in which being able to express a quantity in several different ways is useful.

   Examples:
   The number six could be thought of as one more than five, or $5 + 1$, because if each of the five people in your family eats one granola bar from a box of six, there is one left. Six could also be thought of as 2×3 because six slices of bread are needed to make three sandwiches for lunch.

2. Ask students: How many different names do you think you can find for 100? (See examples on page 30.)

3. Have students work in pairs. Ask them to use a calculator to find and record as many different names for 100 as they can.

Collecting and Organizing Data

While students are exploring with their calculators, ask questions such as:

• What operations are you using?

• What operations have you not used? Why? How could you use those operations?

• How could you make an expression with more than one operation?

• What fractions do you think you could use? How would you use them?

▦ How can you use the Opl key to help you find names for 100?

▦ How would you record what arithmetic Opl is performing? (Refer to the activity, **CONSTANT-ly**, page 51.)

▦ Did you use any other special keys? How? What expressions did you record for them?

Names for 100 *(continued)*

Analyzing Data and Drawing Conclusions

After students have recorded their names for 100, have them work as a group to analyze the expressions. Ask questions such as:

- How are some of your expressions alike? How are they different?
- If you had to group your expressions, what categories would you use? Why?
- Select one of your categories and see whether you can write more expressions that fit that category.
- Choose one of your expressions and describe a real-life situation in which it might be used.

How did you use the calculator to help you organize your search?

Use the scroll feature, ⟳ ⟲, to analyze the expressions.

Continuing the Investigation

Have students come up with a class set of categories. Post each category on a chalkboard or wall and have students continue to add expressions.

Examples:

Names for 100

Names that use division:

$500 \div 5$

$25 \div 1/4$

Names for 100

Names that use addition and multiplication:

$50 + 4 (12 \ 1/2)$

$50 + 5 (10)$
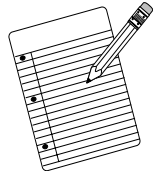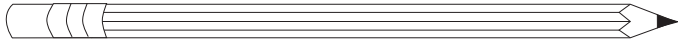

Names for 100

Names that use division:

$50 \div 1/2$

$49 \ 1/2 + 50 \ 1/2$

12.5×8

Name:

Names for 100
Recording Sheet

Collecting and Organizing Data

100 = _____

100 = _____

100 = _____

100 = _____

100 = _____

100 = _____

100 = _____

100 = _____

100 = _____

100 = _____

Analyzing Data and Drawing Conclusions

- Group your expressions into two or more categories. Explain your categories.

- Choose three of your expressions and describe a real-life situation in which each one might be used.

Questions we thought of while we were doing this activity: