Unit 4, Lesson 10

Ten Times As Much

Let's write equations to show the relationship between the digits in multi-digit numbers.

Warm-up

Number Talk: Related Numbers

Find the value of each expression mentally.

- $650 + 75$
- $5{,}650 + 75$
- $50{,}650 + 75$
- $500{,}650 + 75$

Activity 1

Alike but Not the Same

1. Complete the table with the value of the 8 in each number.

number	value of the 8
180,000	
108,000	
100,800	
100,080	
100,008	

2. Describe the relationship between the value of the 8 in each number.

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3. Write a multiplication or division equation to represent the relationship between the values of the 8 in two different numbers in the table.

Activity 2

More and More Money

Diego's class counts collections of play money during a math class. There are 4 types of bills: tens, hundreds, thousands, and ten thousands.

Diego finds 9 of each type of bill. He organizes each type into a stack, creating 4 stacks.

1. How much money is in each stack of bills?
   a. 9 tens
   b. 9 hundreds
   c. 9 thousands
   d. 9 ten thousands

2. Describe the relationship between the values of each stack of bills.

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_____

3. How is the value of the stack of thousands related to the value of the stack of ten thousands? Write an equation for this relationship.

4. Clare had 21 bills of each type. How much money is in each stack of bills Clare has?

   a. 21 tens

   b. 21 hundreds

   c. 21 thousands

   d. 21 ten thousands

5. What is the value of the 2 in each stack of bills?

6. How is the value of the 2 in the stack of thousands related to the value of 2 in the stack of ten thousands? Write an equation for this relationship.