# 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.

- $650 + 75$

- $5,650 + 75$

- $50,650 + 75$

- $500,650 + 75$

## 10.1: 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.

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

## 10.2: More and More Money

Diego's class is counting collections of play money during a math class. There are four types of bills: tens, hundreds, thousands, and ten-thousands.

Diego found 9 of each type of bill. He organized each type into a stack, creating four 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.

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