# Operations and Algebraic Thinking

### **LESSON 1.2 ACTIVITY**

## Multiplicative Comparison Scavenger Hunt

**Directions:** Complete the following steps on your scavenger hunt.

- 1. With a partner, go on a scavenger hunt around your classroom to find the following items.
  - a. An item that is approximately 6 times as long as a box of crayons.
  - b. An item that is approximately 5 times as wide as an unsharpened pencil is long.
  - c. An item that is approximately 2 times as wide as a sheet of paper is long.
  - d. An item that is approximately 2 times as wide as an index card is long.
- 2. Now create a tape diagram for two of your "found" items from Step 1.

**3.** Write an equation, using a variable for your unknown, to represent the tape diagrams you created in Step 2.

#### **Extend Your Thinking**

- Using your knowledge of multiplicative comparison and the information found in the scavenger hunt, relate two items in your classroom using a multiplicative comparison.
- 2. Explain the relationship between a box of crayons and a sheet of loose-leaf paper based on your scavenger hunt information.

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### **LESSON 1.2 PRACTICE**

## Multiplicative Comparison Is for the Dogs

**Directions:** Use the table to answer the following problems.

Dog Breed	Average Height of Breed (in.)
Cane Corso Mastiff	27 in.
Chihuahua	6 in.
Afghan Hound (female)	25 in.
Rhodesian Ridgeback	24 in.
Basenji (male)	24 in.
Dachshund	5 in.
Brussels Griffon	7 in.
Yorkie	8 in.

1. Compose three word problems that show evidence of multiplicative comparison. For your word problems, include at least one problem that shows an unknown product, one problem that shows group size unknown, and one problem that shows number of groups unknown.

2. For each word problem you composed above, draw a tape diagram that would accurately represent each comparison in the word problem.

- 3. For the tape diagrams you drew above, write an equation that would accurately represent each. Remember to use a variable to represent your unknown in each problem.
- **4.** Jackie was a judge at the dog show. She had to judge one group of 65 dogs the first round. During the second round, she had to judge a group of 13 dogs. How many times more dogs did Jackie judge in the first round than the second round?
- 5. In the second round, the dogs were divided into groups of small dogs and large dogs, so she had one group of 5 small dogs and one group of 8 large dogs to compose the group of 13 dogs. What type of comparison is seen in this group that is different than the comparison that is seen between the first-round and second-round groups?

#### **Extend Your Thinking**

1. Research some famous monuments around the world. Compare the heights or widths of these monuments to an item in your classroom.

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### **LESSON 1.2**

## Common Core Assessment Practice

**Directions:** Complete the problems below.

- 1. 56 is eight times as many as which number?
  - **a.** 5
  - **b.** 6
  - **c.** 7
  - **d.** 8
- 2. It takes Joey four times longer than Megan to get to school. It takes Megan 6 minutes to get to school. How long does it take Joey to get to school?
  - a. 4 minutes
  - b. 6 minutes
  - c. 12 minutes
  - d. 24 minutes
- **3.** Boris has 72 stamps in his collection. He has eight times as many stamps as his friend Jane. How many stamps does Jane have?
  - **a.** 6
  - **b.** 7
  - **c.** 8
  - **d.** 9
- **4.** Ari waited in line for the roller coaster eight times longer than she waited in line for the fun house. She waited 96 minutes to ride the roller coaster. Write an equation that shows how to find the number of minutes Ari waited in line for the fun house. Then solve the equation.
- A bookshelf is 60 inches tall. The bookshelf is four times taller than the table beside it. Write an equation to show what you would need to do in order to find the height of the table.