

## Lesson 2: The Relationship of Multiplication and Division

### Classwork

#### Opening Exercise

Draw a pictorial representation of the division and multiplication problems using a tape diagram.

a.  $8 \div 2$

b.  $3 \times 2$

#### Exploratory Challenge

Work in pairs or small groups to determine equations to show the relationship between multiplication and division. Use tape diagrams to provide support for your findings.

1. Create two equations to show the relationship between multiplication and division. These equations should be identities and include variables. Use the squares to develop these equations.
2. Write your equations on large paper. Show a series of tape diagrams to defend each of your equations.

Use the following rubric to critique other posters.

1. Name of the group you are critiquing
2. Equation you are critiquing
3. Whether or not you believe the equations are true and reasons why

**Problem Set**

1. Fill in each blank to make the equation true.
  - a.  $132 \div 3 \times 3 = \underline{\quad}$
  - b.  $\underline{\quad} \div 25 \times 25 = 225$
  - c.  $56 \times \underline{\quad} \div 8 = 56$
  - d.  $452 \times 12 \div \underline{\quad} = 452$
  
2. How is the relationship of addition and subtraction similar to the relationship of multiplication and division?