

Balance— Reasoning with Inequalities

Name: _____

You will use logical reasoning to find the unknown values of five shapes.

EXPLORE

1. Open **Balance--Reasoning with Inequalities.gsp**. Go to page “Puzzle B.”

Work with a partner to find the numerical value of each shape. Each shape has a value from 1 to 5, but no two shapes have the same value. Here’s what to do:

- Compare shapes by dragging them to opposite sides of the scale.
- Observe the scale to determine the relationships between the shapes.
- Represent these relationships by writing statements that use the $>$ and $<$ symbols.
- Press *Reset* to clear the shapes.
- Continue comparing shapes until you find each shape’s value.

2. Write down the relationships you find using $>$ and $<$. When you find the value of each shape, write it down.

The Shapes We Compared				
Each Shape’s Value				
 = ____	 = ____	 = ____	 = ____	 = ____

3. Go to page “Puzzle C.” Write down the relationships you find using $>$ and $<$. When you find the value of each shape, write it down.

The Shapes We Compared				
Each Shape's Value				
 = ____	 = ____	 = ____	 = ____	 = ____

4. Go to page “Puzzle D.” Write down the relationships you find using $>$ and $<$. When you find the value of each shape, write it down.

The Shapes We Compared				
Each Shape's Value				
 = ____	 = ____	 = ____	 = ____	 = ____

5. Go to page “Make Your Own.” Have your partner assign values to each shape to make a puzzle for you to solve. Write down the relationships you find using $>$ and $<$. When you find the value of each shape, write it down.

The Shapes We Compared				
Each Shape's Value				
 = ____	 = ____	 = ____	 = ____	 = ____

6. What strategies did you use to find the value of each shape?
