

Balance— Solving for Unknowns, Part One

Name: _____

You will use a scale to determine the unknown numerical values of shapes.






EXPLORE

1. Open **Balance--Solving for Unknowns Part One.gsp**. Go to page “Puzzle B.”






Work with a partner. Follow these steps to find the value of each shape:

- Drag the shape whose value you know to one side of the balance.
- Then drag a different shape to the other side of the balance. Continue dragging copies of that shape to that side until the scale balances.
- Write an addition equation to represent the relationship shown on the balanced scale.
- Then, write the related multiplication equation.
- Find the value of the shape.
- Press *Reset* to clear the balance.
- Continue in the same way to find the values of the other shapes.






2. Find the value of each shape. Write an addition equation and the related multiplication equation for each of the four unknown shapes.

Value of 	Value of Other Shapes	Equations
6	 =	
6	 =	
6	 =	
6	 =	

3. Go to page “Puzzle C.” Find the value of each shape. Write an addition equation and the related multiplication equation for each of the four unknown shapes.

Value of 	Value of Other Shapes	Equations
24	 =	
24	 =	
24	 =	
24	 =	

4. Go to page “Puzzle D.” Find the value of each shape. Write an addition equation and the related multiplication equation for each of the four unknown shapes.

Value of 	Value of Other Shapes	Equations
36	 =	
36	 =	
36	 =	
36	 =	

5. What observations did you make as you worked?
