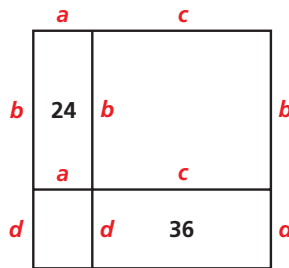
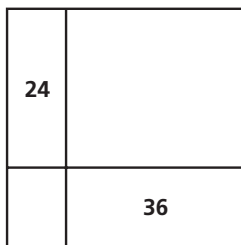


# Game Time

## Shape Up

### Rectangles

The square below has been divided into four rectangles. The areas of two of the rectangles are given. If the length of each of the segments in the diagram is an integer, what is the area of the original square?

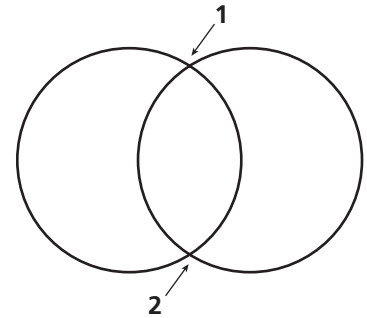


(Hint: Remember  $a + c = b + d$ .)

Use different lengths and a different answer to create your own version of this puzzle.

### Circles

What is the maximum number of times that six circles of the same size can intersect? To find the answer, start by drawing two circles that are the same size. What is the greatest number of times they can intersect? Add another circle, and another, and so on.



### Circles and Squares

Two players start with a sequence of circles and squares. Before beginning the game, each player chooses whether to be a "circle" or a "square." The goal of the game is to have the final remaining shape be the shape you chose to be. Shapes are removed from the sequence according to the following rules: On each move, a player selects two shapes. If the shapes are identical, they are replaced with one square. If the shapes are different, they are replaced with one circle.



  
**Game Time Extra**  
 KEYWORD: MT8CA Games

A complete copy of the rules and game pieces are available online.