# Doubling and Halving Rectangles

What happens when you double each side of a rectangle? Does the perimeter double in size? Does the area double? Let's explore these questions.
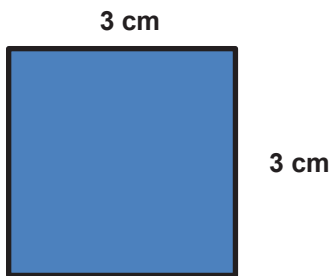
1. Predict what will happen if you double both the width and the length of the rectangle below. Then sketch the new shape and figure out the perimeter and the area. How do these measurements compare to those of the original shape?

2"

1"
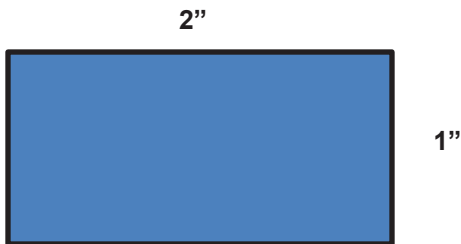
2. Predict what will happen if you double just one set of sides for the rectangle below (either length or width). Then sketch the new shape and figure out the perimeter and the area. How do these measurements compare to those of the original shape?

1"

2"
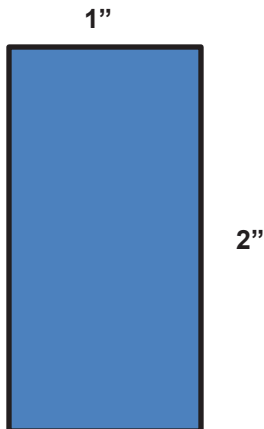
3. Predict what will happen if you 'double the size' of the square below. Then sketch the new shape and figure out the perimeter and the area. How do these measurements compare to those of the original shape?

3 cm

3 cm

4. Predict what will happen if you halve one set of sides for the rectangle below (either length or width). Then sketch the new shape and figure out the perimeter and the area. How do these measurements compare to those of the original shape?

Does it matter which side you halve? Test it out.

4 cm

6 cm
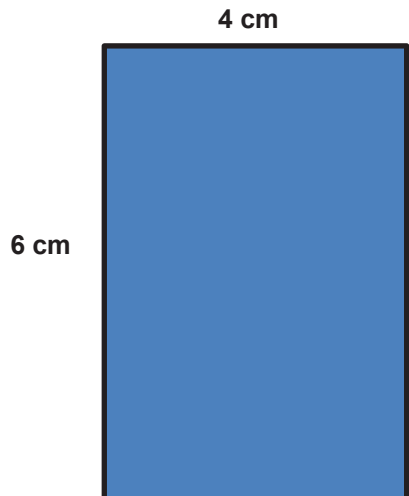
5. How did your predictions compare to your final results? What did you discover about the relationship between perimeter and area as you change the size of the shape (or one set of sides)?