

In Search of Perfect Squares

NAME _____

1. Use your geoboard and rubber bands to model each square and complete the table below.

SIDE LENGTH	AREA	PERIMETER
5 units		
8 units		
	49 units ²	
	4 unit ²	
		12 units
		24 units
x units		
	y units ²	

2. A number is called a “perfect square” if it represents the area of a square whose side length is a whole number. For example, 25 is a perfect square, because 25 square units represents the area of a square with a side length of 5 units. Which column above shows perfect squares?
3. Construct all the squares that are possible using your geoboard. Consider only squares with horizontal and vertical sides. Record the side lengths and corresponding areas in the table below in order from least to greatest.

AREA (UNITS ²)	SIDE LENGTH (UNITS)	SQUARE ROOT OF THE AREA

4. If you know the side length of a square, how can you find its area *without* a geoboard?

5. If you know the area of a square, how could you find the side length *without* a geoboard?

6. What is the relationship between the side length of a square and the square root of its area?