

Big Brother: Navajo Rugs-1st Grade

Name _____

How many paperclips is the whole piece of paper from top to bottom?

How many paperclips is the whole piece of paper from side to side?

How many paperclips is the rug from top to bottom?

How many paperclips is the rug from side to side?

Turn the paper over. Use three colors to make your own rug. Then measure your rug.

What 3 colors did you choose?	Measure each color.
	paperclips
	paperclips
	paperclips

Name _____

Big Brother: Navajo Rugs-Measuring with a Ruler 1st grade

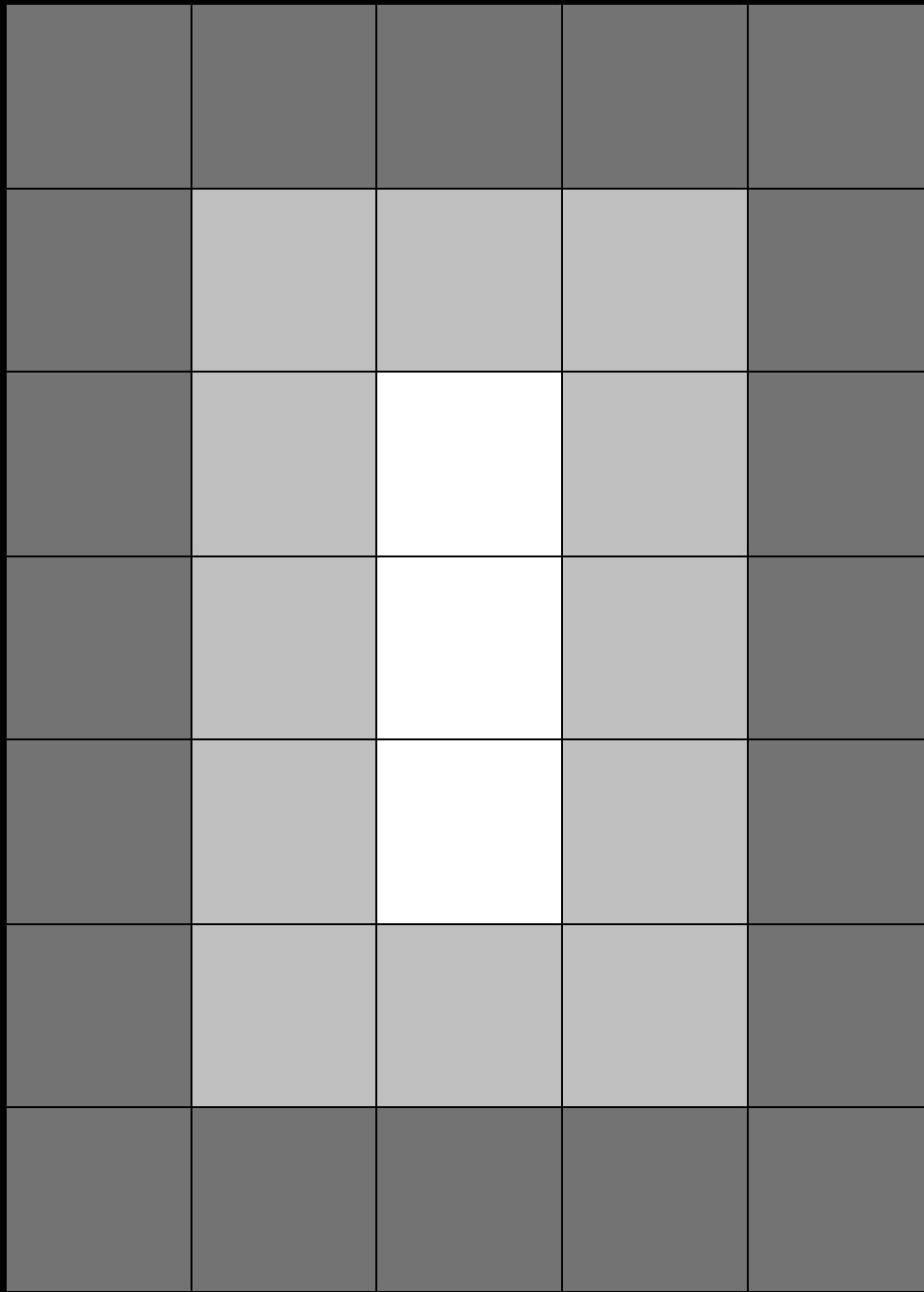
Look at your 1 inch ruler. This is a part of a ruler that is only 1 inch long. You will see 1 inch looks like 1". This is a short way to write 1 inch. You are going to measure a rug design using the 1" ruler as a measuring tool. When you write your answer, write " after your measurement to show your measurement in inches.

1. Lay the ruler in the top left corner of the rug. Count how many times the 1" ruler can go around the whole rug. How many times can it go around? _____
2. Lay the ruler across the top of the dark gray image. Count how many times the 1" ruler can go around the dark gray areas of the rug. How many times can it go around? _____
3. Lay the ruler across the white area of the rug. Count how many times the 1" ruler can go around the white area of the rug. How many times? _____

The amount of times it takes to measure a 1" ruler around a shape is called the perimeter. You are measuring the perimeter of each color in inches.

Turn the rug over. Use three colors to make your own rug. Use squares and rectangles to make designs on your rug. Then measure your rug.

What 3 colors did you choose?	Measure each color.



1. Look at the yardstick and the ruler. What would be the better tool to measure the rug? Why?

You are going to measure the perimeter of the rug. The perimeter is the edge around the shape. You are going to measure using the unit of inches. You will see 1 inch look like 1". This is a short way to write 1 inch. When you write your answer, write " after your measurement to show your measurement in inches.

Before you measure each perimeter you are going to estimate the distance around the color. An estimate is a guess. After you guess how many inches the perimeter of each color is, you will measure and find the actual answer.

1. What do you think is the perimeter around the **whole** rug in inches?

ESTIMATE _____

2. Now measure the perimeter around the **whole** rug?

ACTUAL _____

3. What do you think is the perimeter of the **dark gray** area?

ESTIMATE _____

4. Now measure the perimeter of the **dark gray** area of the rug?

ACTUAL _____

5. What do you think is the perimeter of the **white** area?

ESTIMATE _____

6. What is the perimeter of the **white** area of the rug?

ACTUAL _____

7. Turn the rug over. Use three colors to make your own rug. Use squares and rectangles to make designs on your rug.

What 3 colors did you choose?	What is the perimeter of each color?

You are going to measure the area of the whole rug and then the dark gray and white areas of the rug. Area is the measurement of the surface of the shape. You are going to measure using the unit of square inches. For each square inch, the surface area is 1 inch on each side – making a square. This is how they came up with the name “square inch”. When you measure the area of the rug, you must measure how many square inches makes up the shape. To measure the square inch of the whole rug you will measure the length and width of the rug.

1. What is the length of the rug in inches? _____ inches
2. What is the width of the rug in inches? _____ inches
3. To find the area of the whole rug you will multiply the length and width.
What is the area of the rug? _____ square inches

When measuring the area of squares and rectangles you can measure the length and width and then multiply to get the area. When measuring irregular shapes, such as the dark gray and white area of the rug, you cannot multiply the length and width. You will need to count the square inches in each shape.

4. What is the area of the dark gray area of the rug? _____ square inches
5. What is the area of the white area of the rug? _____ square inches

Turn the rug over. Use three colors to make your own rug. Use squares and rectangles to make designs on your rug.

What 3 colors did you choose?	What is the area of each color?