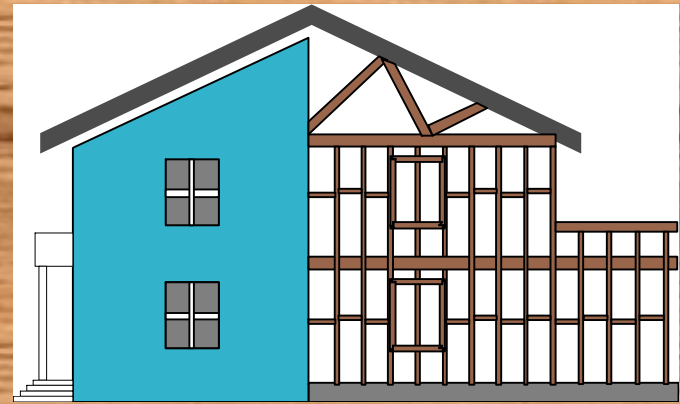
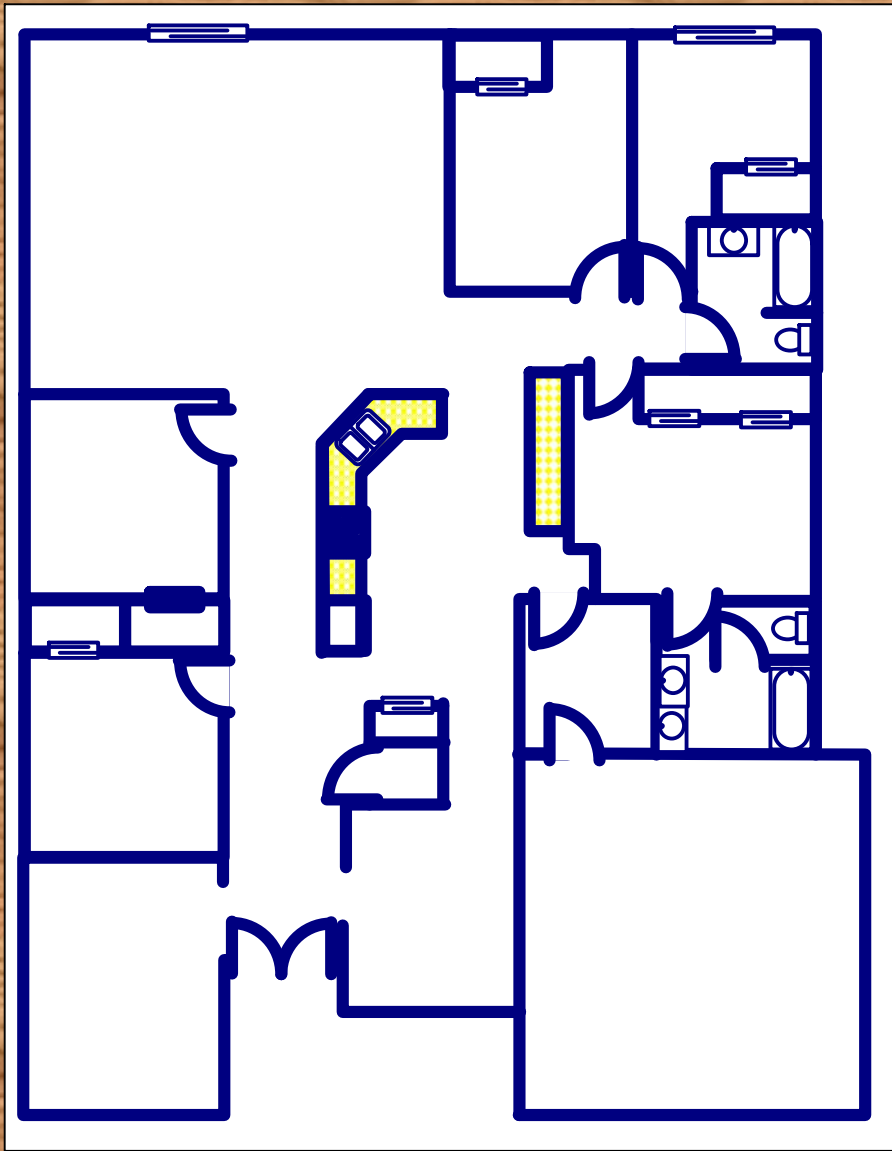




DESIGNING

A

HOME



By Nancy L. Wilkinson

Lesson 3 More Fun With Area

Objective: Students will find the area of squares, rectangles, triangles and trapezoids.

Materials:

Worksheets 1 and 2 for each student
Rulers

Activity Two Review:

Write each formula for area on the board. Show the different shapes and have the students identify which area belongs to the correct shape.



Activity:

The students should read the lesson for Worksheet 1. The students will measure the various shapes and find the area based on their measurements. This lesson might need to be supplemented with other practice sheets based on the students needs.

Closure:



Most classrooms are about 30 feet by 30 feet. What does this mean?

Find the area of your classroom. You may use any measurement unit that you would like. Try some not so common units of measure such as paper clips or your math book.

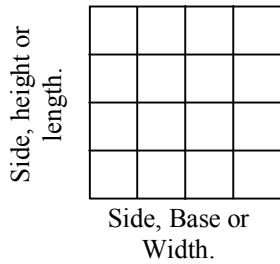
Sketch out a design of your home (where you live) on a sheet of blank paper. Measure each room. Can you figure the total square footage of your home?

Lesson 3
Worksheet 1
More Fun With Area

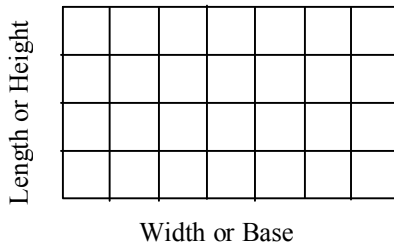
Name _____ Period _____

Directions:

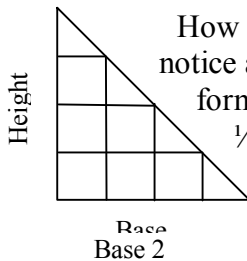
Before you design your home, you will need to understand area. Area is the amount of space inside a shape. We use simple formulas to help us in calculating area. This lesson will focus on the area of a square, rectangle, triangle and trapezoid. You will want to include these shapes in designing your home.



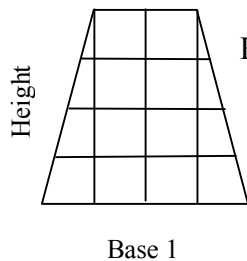
How many smaller squares are inside this figure? _____
The formula for finding the area of a square is s^2 where “s” stands for “side.” You might have also learned that the formula for finding the area of a square is “bh” (base times height) or “lw” (length times width). These are also true formulas.



How many smaller squares are inside this figure? _____
The formula for finding the area of a rectangle is “lw” where “l” stands for “length” and “w” stands for “width.” You might have also learned that the formula for finding the area of a rectangle is “bh” or base times height. This is also true.



How many squares are inside this figure? _____ What do you notice about the size of this triangle and the size of the square above? The formula for finding the area of a triangle is $\frac{1}{2}bh$.



How many squares are inside this figure? _____ The formula for finding the area of a trapezoid is the average of the two bases time the height or $h \left(\frac{b_1+b_2}{2} \right)$. Why do you think we have to average the two bases?

Lesson 3
Worksheet 2
More Fun With Area

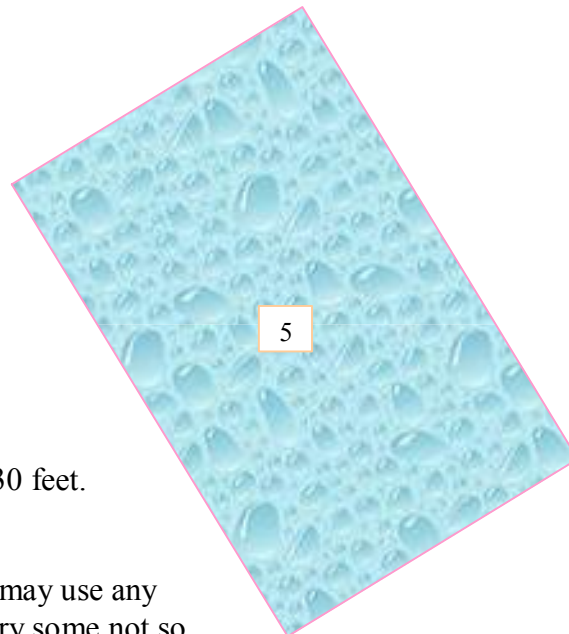
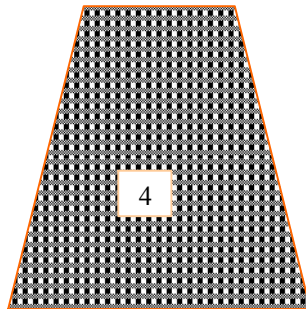
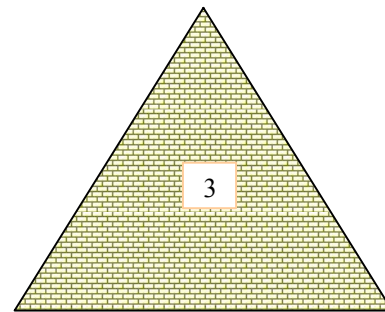
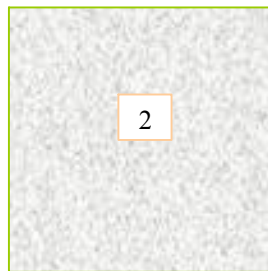
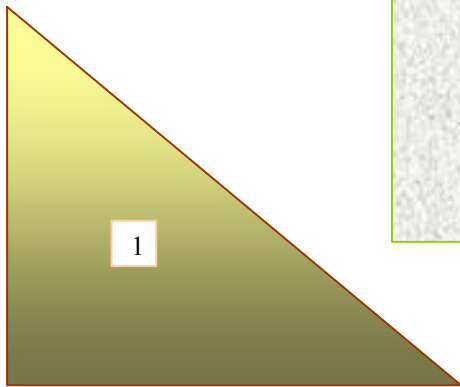
Name _____ Period _____

Directions: You should now understand the formulas for finding the area of different shapes. Below are several shapes. Measure each shape using a centimeter ruler. Find the area.

Square: s^2

Rectangle: lw Triangle = $\frac{1}{2}bh$.

Trapezoid: $h \left(\frac{b_1+b_2}{2} \right)$



6) Most classrooms are about 30 feet by 30 feet. What does this mean?

7) Find the area of your classroom. You may use any measurement unit that you would like. Try some not so common units of measure such as paper clips or your math book.

*Bonus! Sketch out a design of your home (where you live) on a sheet of blank paper. Measure each room. Can you figure the total square footage of your home?