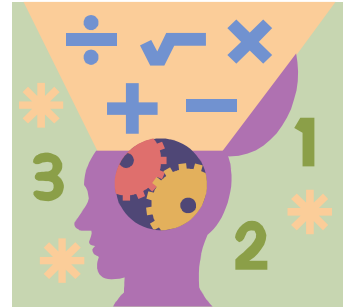


Algebra/Geometry Institute Summer 2009

Faculty Name: Rochelle Clifton

School: I. T. Montgomery Elementary School

Grade Level: Fourth Grade



1. Teaching objective(s)

Develop measurement concepts and formulas through the use of geometry.

The students will learn how to find the number of square inches or square feet in a rectangle.

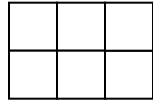
2 Instructional Activities

Tell students that, “Today we will learn how to find the number of square inches or square feet in a rectangle.”

1. Show students a 12” square.



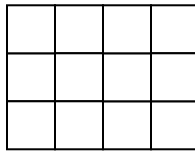
2. Ask students what shape is represented with the paper. (square)
3. Ask students to estimate the sides of the square.
4. Ask for a student volunteer to estimate the length of the side of the square.
5. Ask a student volunteer, “What is the actual length of the side?”
6. Say, “Now if that side is 12” in length, then what is the length of the other sides?”
7. Listen for student responses.
8. Place a square on the board. Tell students that this is called a “12-inch-by-12-inch square.”
9. Say, “So, if each side equals 12 inches long, then it is also 1 foot.”
10. Next, show another 12 inch-by-12-inch square. This time it is divided into 1” squares. Place it on the board.
11. Tell students that each of these 1” squares is called 1 square inch.
12. Tell students another way of writing 1 square foot is 1 ft^2 .
13. Make a rectangle using four more 12” squares. Place them on the board with the first two forming a rectangle.



6 square feet (6 ft^2)

14. Ask students, “How many square feet did I use to make this rectangle?” (6)
15. Tell the students that the area of this rectangle is 6 square feet.” ($A= 6 \text{ ft}^2$)
16. Attach six more 12” squares to the rectangle. It should make a 3x4 rectangle.

4 across

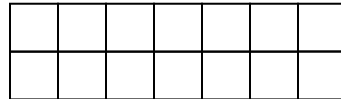


3 down

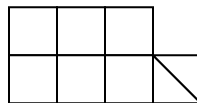
17. Ask students, “How many square feet are in this rectangle?” (12)
18. Ask for a volunteer to come up to write the area of the rectangle on the board.
19. Have students to repeat step 16 by adding two squares and rearranging the shape until you can make a 2’ by 7’ rectangle.

7 across

2 down



20. Ask what the area of the rectangle is. (14)
21. Tell the students cut one square foot in half.
22. Ask students, “What is the area of this half of the square since you cut it in half?” ($1/2$ ’ sq. ft)
23. Place six squares and two halves on the board to make a figure. Allow the students to give the area of that shape. (7^2 ft).



24. Ask students how they got that answer.
25. Tell students that this ends the lesson for today. Review the concepts taught today.
26. Students will be given two activity sheets with figures on them to be cut apart to measure to find the square footage.
27. Students will record the number of square feet and the area of the shape on their data sheet.
28. Walk around to observe students working in their cooperative learning groups. Go over the shapes with the students.

3 Materials and Resources

Chalk/ Dry Erase board
Markers
Tape
Rulers
Scissors
1" Grid Paper (Blank)
1" Grid Paper (w/ objects)

4 Assessment

- Observation
- Student work

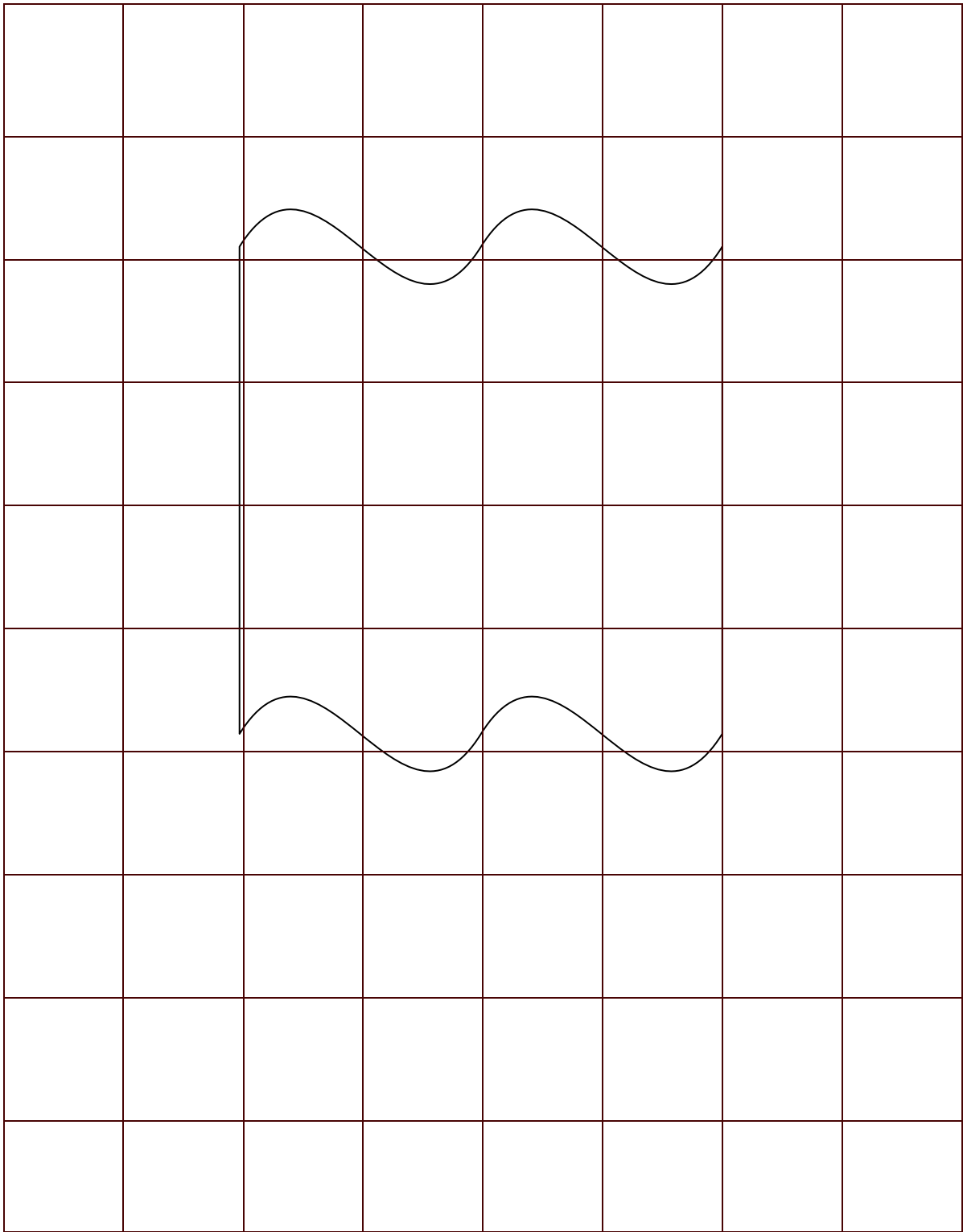
5 References

- Adapted from Saxon Math (Fourth Grade Level)
Published by Saxon Publishers/ Harcourt Achieve Inc. & Nancy Larson
Publishing Date: 2007

Data Sheet

<u>Shape</u>	<u># of 12" Squares Used</u>	<u>Area</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Attachment # 3 (Shape #1)



Attachment # 4 (Shape #2)

