

Estimating Area

STRAND: Measurement and Geometry

STRAND CONCEPT: Area, Perimeter, and Circumference

SOL 5.8a

Remediation Plan Summary

Students estimate and find the area of polygons.

Common Errors and Misconceptions

- Students may use the formula for perimeter when finding the area.
- Students may confuse the units for area and perimeter and not include units squared for area.
- Students may incorrectly count the partial pieces of units giving the wrong answer.
- Students may have trouble conceptualizing the difference between a linear unit and a square unit.

Materials

- 3 inch x 3 inch construction paper squares
- Estimating Area recording sheet
- Reflection exit ticket

Introductory Activity

Make 3 inch x 3 inch squares from construction paper, and give one to each student. Ask students to *estimate* the smallest number of these squares that would be needed to exactly cover the top of a desk or table. Encourage them to use the square to approximate the size of the desktop. Ask them what they could do if the squares do not exactly cover the top of the desk. (Use *pieces* of squares, such as right triangles, to approximate the area.)

Plan for Instruction

1. Distribute copies of the “Estimating Area” worksheet. As students look at problem 1, explain that a square has been placed on the grid, and ask for suggestions about ways to estimate the area of the square. (Students should respond with suggestions to count the number of 1-unit squares inside the large square and to add the odd-shaped pieces together to make more 1-unit squares.)
2. Have the students try the remaining shapes on their own. Provide individual assistance as needed.
3. Compare answers as a class. Did everyone arrive at the same estimates? Why, or why not?
4. Conduct a class discussion about why the ability to estimate area is an important skill to have and when they would use this skill.

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Pulling It All Together (Reflection)

Have students complete the “Reflection” exit ticket.

Note: The following pages are intended for classroom use for students as a visual aid to learning.

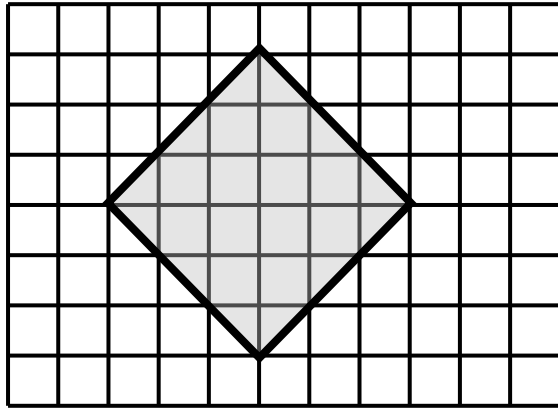
Virginia Department of Education 2018

Name: _____

Estimating Area

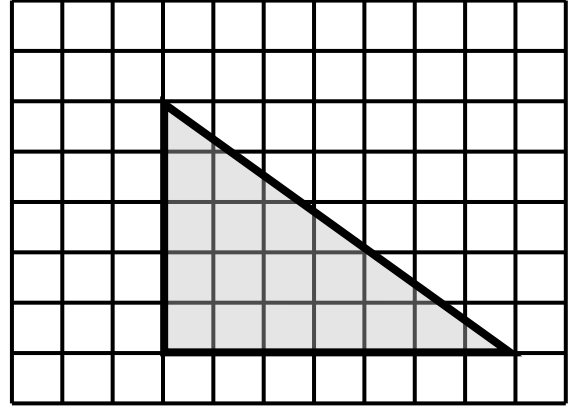
Use the grid to estimate the area of the figure to the nearest whole number.

1.



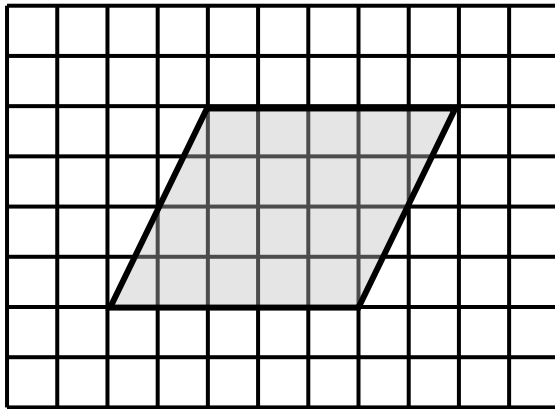
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2.



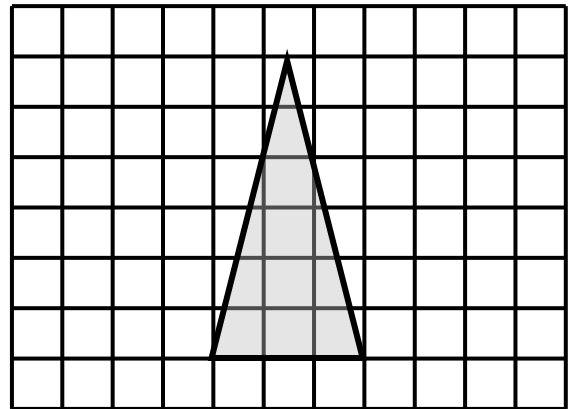
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3.



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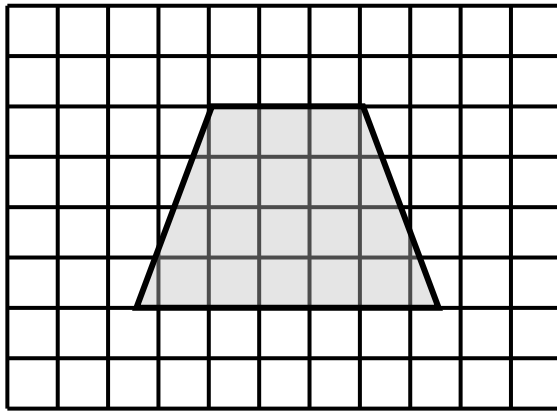
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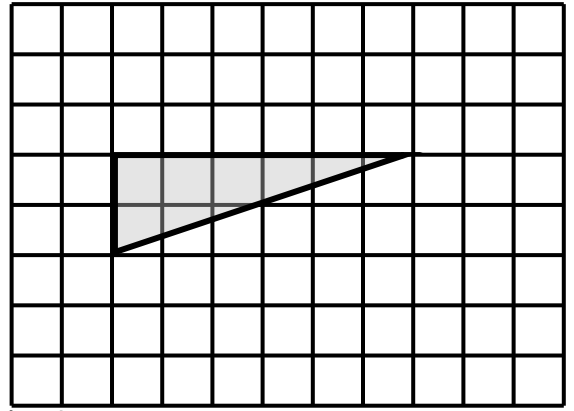
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5.



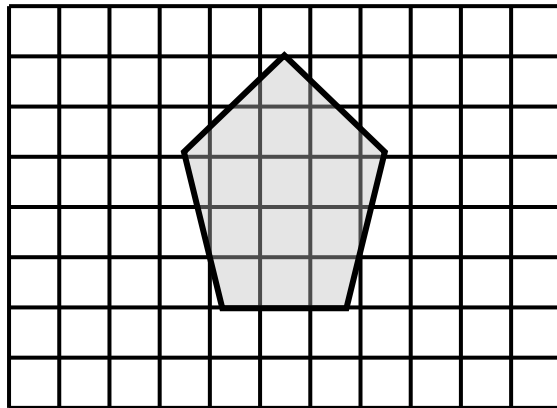
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6.



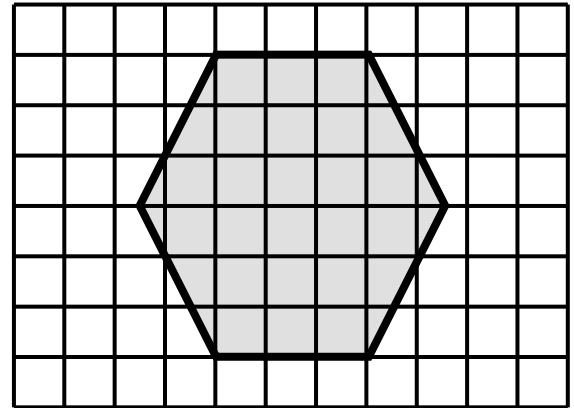
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7.



1unit

8.



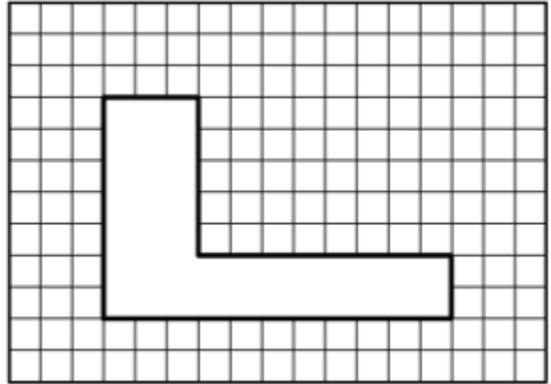
1unit

Name: _____

Reflection

1. Without counting the squares, what is your estimate of the area of the figure to the right?

2. How can you find the area of the figure to the right?



3. Was your estimate close? _____

4. Why is finding an estimate a helpful strategy? _____
