



## Mathematics Family Letter

### Unit 4: Geometry



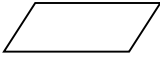
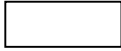

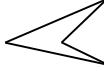


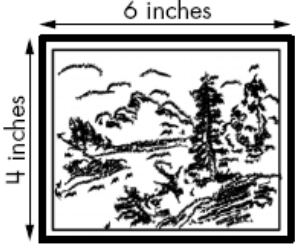
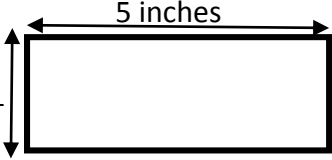

Dear Family,

Our class is starting a new unit in math about geometry. In this unit, students learn the characteristics of polygons. They will also learn how to partition shapes into parts with equal areas and express the area as a fraction of the whole.

Students will be expected to understand that shapes in different categories may share attributes. For example, rhombuses, squares, rectangles, and others all have four sides. They will also understand that the shared attributes may define a larger category. In our example, the larger category would be quadrilaterals.

Throughout the unit, students will work toward the following goals:

Benchmark/Goals	Examples				
Recognize rhombuses, squares, parallelograms, rectangles, and trapezoids as quadrilaterals and draw examples of quadrilaterals that do not fit in one of these subcategories.	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             Rhombus   </div> <div style="text-align: center;">             Square   </div> <div style="text-align: center;">             Parallelogram   </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">             Rectangle   </div> <div style="text-align: center;">             Trapezoid   </div> </div> <div style="text-align: center; margin-top: 10px;">             Quadrilateral that does not fit in a category   </div>				
Partition shapes into parts with equal areas, and express the area as a fraction of the whole.	<table border="1" style="margin: auto;"> <tr> <td style="padding: 5px;"><math>\frac{1}{4}</math></td> <td style="padding: 5px;"><math>\frac{1}{4}</math></td> <td style="padding: 5px;"><math>\frac{1}{4}</math></td> <td style="padding: 5px;"><math>\frac{1}{4}</math></td> </tr> </table>	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$		

Benchmark/Goals	Examples
Identify and measure perimeter.	<p data-bbox="721 247 1268 279">What is the perimeter of this photograph?</p>  <p data-bbox="967 323 1422 470">The top and bottom of the rectangle will be the same, and the sides will be the same, so  <math>6 + 6 + 4 + 4 = 20</math></p> <p data-bbox="1049 516 1341 548">Perimeter is 20 inches.</p>
Find a missing side length when given the length of one side and the area or perimeter.	 <p data-bbox="610 789 951 821">The perimeter is 14 inches</p> <p data-bbox="980 573 1365 642">Find the length of the missing side.</p> <p data-bbox="980 684 1382 779">The top and bottom of the rectangle are the same so <math>5+5=10</math> inches.</p> <p data-bbox="980 816 1382 879">The whole perimeter is 14 inches, and <math>14 - 10 = 4</math> inches.</p> <p data-bbox="980 921 1382 1016">The missing side is one-half of the remaining 4 inches, so the answer is 2 inches.</p>
Find rectangles with the same perimeter and different areas, or with different perimeters and the same area.	 <p data-bbox="594 1251 902 1314">The perimeter is 16 cm. The area is 16 square</p> <p data-bbox="1032 1251 1341 1314">The perimeter is 16 cm. The area is 12 square</p> <p data-bbox="613 1356 1382 1388">These figures have the same perimeter but different areas.</p>

The activity below is related to the mathematics in unit 5. You can use this activity to enrich your child’s mathematical learning experience.

### Polygon and Angle Scavenger Hunt

Look for examples of polygons during your daily travels with your child.

When you are in the car together, your child can call out the figures that he or she sees on signs, buildings, shop windows, and so on. Ask your child to talk about the properties of the shapes he or she finds and to compare one shape to another.

### **Measuring Perimeter around the House**

Look for opportunities at home to talk with your child about perimeter: the length of the boundary of a figure.

- What is the perimeter of the new rug—will it fit in the bedroom?
- Is the perimeter of the sandbox larger or smaller than the perimeter of the flower garden?

In our math class, students spend time discussing problems in depth and are asked to share their reasoning and solutions. It is most important that children accurately and efficiently solve math problems in ways that make sense to them. At home, encourage your child to explain his or her math reasoning to you.

Thank you for supporting your child's learning.