

Name: _____ Date: _____ #: _____

Unit 6: Geometry Grade 4

Dear Parents or Guardians,

Our class is wrapping up our current unit in math: Geometry. Students learned about various two dimensional figures, different types of lines, angles and lines of symmetry.

Students should be able to:

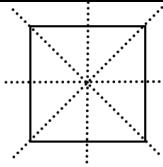
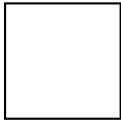
- Recognize angles by their size.
- Identify two-dimensional figures by their points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines.
- Identify right triangles.
- Sketch angles.
- Draw points, lines, line segments, rays, right, acute, obtuse angles, perpendicular and parallel lines.
- Identify line-symmetric figures and draw lines of symmetry.

It is important that your child knows how to apply the standards in daily situations. Below is a chart that will help your child master this unit.

Standard	Examples
Lines and Angles	<p>The diagram shows the following elements: - Endpoint: A point marked with a dot. - Line: A horizontal line with arrows at both ends. - Ray: A line starting from an endpoint with an arrow pointing in one direction. - Line segment: A portion of a line with two endpoints. - Parallel lines: Two lines that run side-by-side without ever meeting. - Perpendicular lines: Two lines that intersect at a 90-degree angle. - Acute angle: An angle less than 90 degrees. - Obtuse angle: An angle greater than 90 degrees. - Right angle: An angle exactly 90 degrees, indicated by a square symbol.</p>
Attributes of 2D figures	<p>Figure Name: Trapezoid Attributes:</p> <ul style="list-style-type: none"> • One set of parallel sides • 2 acute angles and 2 obtuse angles • Quadrilateral • Intersecting lines • 4 line segments • 4 endpoints
Types of Triangles	<p>Triangles can be classified two ways, by their sides or by their angles. *Students have this chart in their journals.</p> <ul style="list-style-type: none"> • If classifying by their sides, triangles can either be an equilateral, isosceles, or scalene triangle. • If classifying by their angles, triangles can be either an acute, obtuse, or right triangle.

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Lines of Symmetry



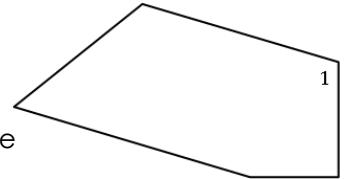
A square has 4 lines of symmetry.

Standards and Sample Problems:

4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

4.G.1 Sample Problem:

1. Look at the pentagon to the right. Highlight two sides on the figure that are perpendicular.

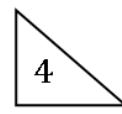
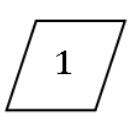


Look at the angle inside the pentagon that is marked with the number 1. Is the angle acute, obtuse, or right?

Label a different angle inside the pentagon with the number 2. Identify that angle as acute, obtuse, or right.

4.G.2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

4.G.2 Sample Problem:



2. Caroline decided to sort the figures above based on their angles. She sorted them into the two groups shown in the chart to the right.

Look at the angles in each of the five figures. Describe how the figures in group A are different than the figures in group B.

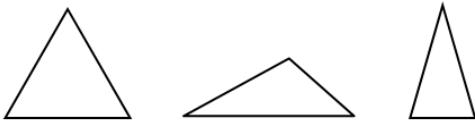
Group A	Group B
2 4 5	1 3

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Describe a different way that Caroline could have sorted the five figures. Be sure to identify the group in which each numbered shape could be classified.

4.G.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

4.G.3 Sample Problem:



3. Lily drew the three triangles above. Draw all possible lines of symmetry on each of Lily's triangles.

Lily was surprised to discover that not all triangles have the same number of lines of symmetry. Explain why some triangles have more lines of symmetry than others.

How can I study?

Students: Please remember, cramming the night before an assessment is not the best way to study! Reviewing the material nightly helps you tremendously. Most importantly, you will be less stressed, and will feel confident on assessment day!

- Review interactive notebooks
- Review your data notebook
- Have your parents create a practice test
- Teach the material to your parents/siblings/friends/pets!
- Review your quizzes
- Create an informational poster or PowerPoint
- Create a practice test or quiz for a friend, and check their work!
- Re-watch Study Jams and Brain Pops we viewed during the unit
- Go back and practice the IXL skills that were done for homework, and try to earn a higher score!
- Check our any of the posted resources on the **Weebly** (www.fourthgradenpes.weebly.com)
- Create flashcards to carry around with you so you can study when you are not at home.

In our math class students spend time discussing and sharing their reasoning and solutions. It is important that children solve problems in ways that make sense to them. Encourage your child to explain their mathematical thinking and solutions with math vocabulary at home.

Happy learning!
Mrs. Alterman