9 Family Letter

Dear Parent or Guardian:

Every time we look in a mirror we see the geometric principle of reflection at work. We use angle measures, lines of symmetry, and reflection when hanging a mirror to see our reflection from head to toe, when using the side mirror of a car to check other traffic, and when building a telescope.

In **Chapter 9, Geometry: Angles and Polygons**, your child will learn how to measure angles, estimate and draw angles, determine angle relationships, and identify triangles and quadrilaterals and their angles. Your child will also learn the problem solving strategy of drawing a diagram. Finally, your child will learn about tessellation patterns. In the study of this chapter, your child will complete a variety of daily classroom assignments and activities and possibly produce a chapter project.

By signing this letter and returning it with your child, you agree to encourage your child by getting involved. Enclosed is an activity you can do with your child that practices how the math we will be learning in Chapter 9 might be tested. You may also wish to log on to **www.msmath1.com** for self-check quizzes and other study help. If you have any questions or comments, feel free to contact me at school.

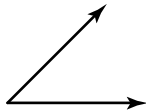Sincerely,

Signature of Parent or Guardian _____ Date _____

9 Family Activity

State Test Practice

Fold the page along the dashed line. Work each problem on another piece of paper. Then unfold the page to check your work.

1. Using the L shaped right angle which has a measure of 90° as a benchmark angle, estimate the measure of the angle below.

A 110°

B 100°

C 20°

D 45°

2. Which of the following is not true of trapezoids?

A Trapezoids have at least one pair of parallel lines.

B Trapezoids must contain at least one right angle.

C Trapezoids are quadrilaterals.

D The interior angles of a trapezoid must total 360°.

Fold here.

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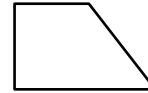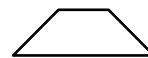
Solution

1. *Hint: You can use the corner of a piece of paper to visualize a right , or 90º, angle.*

The angle above is acute, or less than 90º, so Options A and B can be eliminated.

If you draw in a right angle, the current angle appears to be about half of the right angle. Of the two remaining options, 20º is less than one-third of 90º, and 45º is half of 90. It makes sense that the angle is approximately 45º.

Solution

2. *Hint: A trapezoid, by definition, is a quadrilateral with at least one pair of parallel sides.*

From the definition of a trapezoid, we know that it must have four sides and that at least one pair of sides must be parallel, so Options A and C are true. We also know that the sum of the angles of a quadrilateral is always 360º, so Option D is true.

The trapezoid shown in the diagram has two 90º angles, but the presence of 90º angles is not included in the definition. I can draw a quadrilateral that meets the definition of a trapezoid that does not have 90º angles (see below), so Option B is not true.

The answer is **D**.

The answer is **B**.