LETTER HOME

Location and Shapes

Dear Family Member:

In this unit, students learn to describe the location of objects as a direction and distance from an origin. Students will also be introduced to negative numbers using temperature, depth, and as a way to describe a distance from an origin. This coordinate system is used to locate points on a graph, find places on a map, and even show images on a video screen.

Students will explore this last example as they plot shapes on a coordinate grid. Students will then use the coordinates of a shape to describe the properties of a shape. For example, which set of coordinates will make a square?

As students describe the shapes they are plotting, students are preparing to use reasoning to classify shapes. For example, a square can be classified as a parallelogram but not as a trapezoid.

There are many opportunities to assist your child at home with the concepts in this unit:

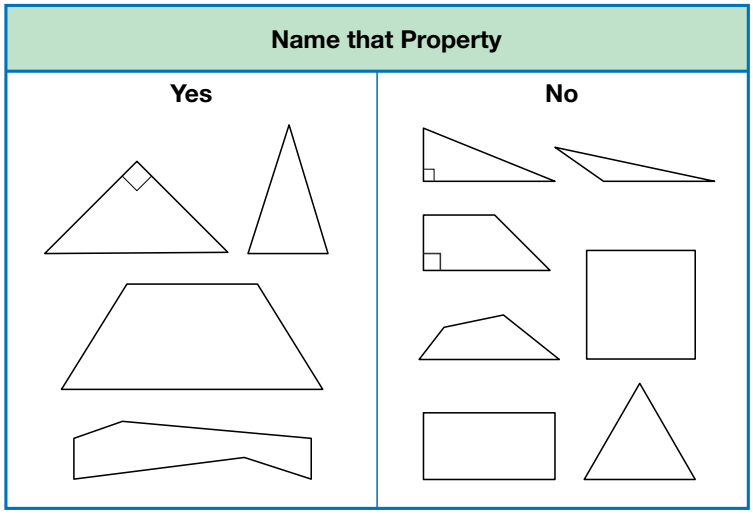

Figure 1: *Shapes sorted for the rule, "one pair of congruent sides"*

- **Find Examples of Negative Numbers.** Ask your child to search for examples of negative numbers in real-life situations: the temperature on a sign or on a thermometer, the location to the left or below an origin on a map (latitude and longitude), the balance in a financial report.
- **Use Coordinates.** While traveling, locate destinations using coordinates found on the edges of a map.
- **Describe Shapes.** Help your child by asking him or her to identify shapes at home and to discuss the parts of common geometric shapes. Talking about the number of sides and vertices (corners) of various shapes is worthwhile. You might also want have your child look for examples of right angles and then angles that are more or less than a right angle.
- **Play Shape Finder.** Name a property of a shape and try to identify and draw several shapes with that property. For example, if a property is a shape with one pair of congruent sides your child may draw shapes like these in the first column of Figure 1.
- **Play Name that Property.** Collect examples of polygons. Draw a two-column table and label one "Yes" and other "No". One player chooses a property and sorts the shapes according to that property. The other player tries to name the property by adding a shape to the "Yes" column that matches the property. If they are correct, players switch roles. See Figure 1.

Math Facts and Mental Math

This unit continues the systematic review and assessment of the multiplication and division facts.

Multiplication Facts. Students review the multiplication facts for the last six facts (4×6, 4×7, 4×8, 6×7, 6×8, 7×8) to maintain and increase fluency and to learn to apply multiplication strategies to larger numbers.

You can help your child review these facts using the flash cards that are sent home or by making a set of flash cards from index cards or scrap paper. Study facts in small groups each night and focus only on those facts that your child needs to learn. As your child goes through the flash cards, put the cards in three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For Facts I Need to Learn, work on strategies for figuring them out. If there are many multiplication facts that your child still needs to learn, divide them into smaller groups of facts. Choose groups of facts that lend themselves to the use of the same strategy and focus on one group at a time.

For Facts I can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use mental math strategies to multiply 10s and 100s. You can also help your child extend and deepen understanding by asking him or her to choose a multiplication fact that was difficult to learn and describe strategies used for learning the fact.

Division Facts. Students review the division facts for the last six facts (4×6, 4×7, 4×8, 6×7, 6×8, 7×8) to maintain and increase fluency and to learn and apply multiplication and division strategies to larger numbers.

You can help your child review these facts using the flash cards that are sent home or by making a set of flash cards from index cards or scrap paper. Study facts in small groups each night. As your child goes through the flash cards, put the cards into three stacks: Facts I Know Quickly, Facts I Can Figure Out, and Facts I Need to Learn.

For the Facts I Need to Learn, work on strategies for figuring them out. Good strategies include:

Turn-around facts. To solve $42 \div 6$: I know $6 \times 7 = 42$, so $42 \div 6 = 7$.

Reasoning from known facts. To solve $28 \div 4$: I know $28 \div 2 = 14$ so $28 \div 4$ is half of 14 or 7.

For Facts I Can Figure Out, use the flash cards to practice the facts for fluency.

For Facts I Know Quickly, help your child use mental math strategies to divide 10s and 100s:

$$320 \div 40 = 8; \; 4200 \div 700 = 6$$

Thank you for taking time to talk with your child about what he or she is learning in math.

Sincerely,