

LETTER HOME

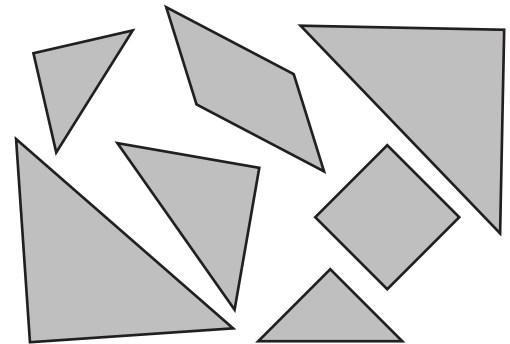
Analyzing Shapes

Dear Family Member:

In this unit, students will describe, compare and classify two-dimensional and three-dimensional shapes. At the start of the unit, students use a set of seven shapes to solve puzzles called tangrams. Although one aim is to have fun solving geometric puzzles, there are also mathematical goals. Students make, draw, and describe shapes to develop spatial visualization skills and develop language to compare and categorize shapes.

Describing 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—triangles, squares, pentagons, and so on—is worthwhile. You might also make a list of examples of right angles—square angles—at home. Comparing angles to see if they are more or less than a right angle will help your child understand angular measure.

Play Shape Finder. Name a property of a shape and try to identify and draw several shapes with that property. For example: If the property is a shape with 4 sides, a student may draw the following shapes. See Figures 1 and 2 for a list of properties and sample shapes.



The seven tans of tangrams—an old Chinese puzzle



Math Facts and Mental Math

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

Multiplication Facts. Students review the multiplication facts for the nines to 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. 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. Good strategies include:

Doubling. To solve 2×9 , think $9 + 9 = 18$.

Reasoning from known facts. To solve 9×4 , think $9 \times 2 = 18$ and $18 + 18 = 36$. Or use 10×4 to solve 9×4 . $10 \times 4 = 40$ and $40 - 4 = 36$.

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: $90 \times 200 = 18000$, $50 \times 90 = 4500$.

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

Sincerely,

Property	Sample Shapes
4 sides (quadrilaterals)	
All right angles	
At least one pair of sides are parallel	
Only one pair of parallel sides	
Opposite sides are the same length	
All sides are equal	

Figure 1: A list of properties of 2-D shapes with sample shapes for Shape Finder

Property	Sample Shapes
At least one triangle face	hexagonal pyramid square pyramid triangular prism triangular pyramid
At least 12 edges	cube hexagonal prism hexagonal pyramid square prism rectangular prism
Opposite faces are parallel and congruent	cube cylinder hexagonal prism square prism rectangular prism triangular prism
At least one right angle	cube square prism
No vertices	sphere cylinder
At least one pair of parallel edges	cube hexagonal prism rectangular prism square prism square pyramid triangular prism
At least one rectangular face	cube hexagonal prism rectangular prism square prism square pyramid triangular prism

Figure 2: A list of properties of 3-D shapes with sample shapes for Shape Finder