

Grade 5 Module 5

Tips for Families

Key Concepts Overview

Focus TEKS: **5.3I, 5.4G, 5.4H, 5.5A, 5.6A, 5.6B**

The focus of Module 5 is exploring various two- and three-dimensional figures while understanding concepts of volume and area. Your student will:

- Find the **volume of a solid** by building and counting **unit cubes**, packing with unit cubes, and composing and decomposing rectangular prisms using layers.
- Find the volume of rectangular prisms using the following volume formulas.
 - $V = l \times w \times h$
 - $V = Bh$
- Find the total **volume** of solid figures composed of two non-overlapping rectangular prisms.
- Find the area of rectangles with whole-by-mixed and whole-by-fractional number side lengths by tiling, drawing, relating to the distributive property, and using the area model.
- Classify triangles by side lengths (**equilateral, isosceles, scalene**) and by angle measurements (acute, right, obtuse).
- Draw and classify quadrilaterals such as trapezoid, parallelogram, rhombus, rectangle, and square.
- Classify two-dimensional figures in a **hierarchy** based on their properties.

You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages of the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

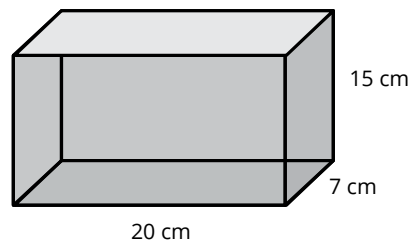
- Practice finding the volume of rectangular prisms by using rectangular prisms found around you. Use a ruler to measure the length, width, and height of each prism to the nearest centimeter or inch. Then find the volume of the prism. For example, if a cereal box measures a length of 9 inches, a width of 3 inches, and a height of 13 inches, then the volume of this cereal box is 351 cubic inches.
- During dinner or while on the go, help your student practice finding the area of a rectangle. Choose values for the dimensions of a rectangle that are based on multiplication facts he knows. For example, you say, "The length of a rectangle is 8 yards, and the width of the rectangle is 9 yards. What's the area of the rectangle?" He says, "8 yards times 9 yards equals 72 square yards."
- Review the attributes of triangles (acute, right, obtuse, equilateral, isosceles, scalene) with your student. Ask her to define the different attributes.



- Review quadrilaterals (trapezoid, parallelogram, rhombus, rectangle, and square) with your student. Ask him to define the different quadrilaterals and explain the similarities and differences of the quadrilaterals.
- Have a scavenger hunt to find objects around your neighborhood that contain shapes that are quadrilaterals or triangles. Ask your student to classify each quadrilateral or triangle that they find.

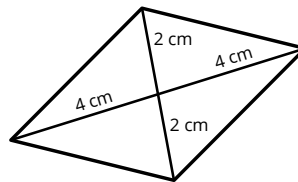
Terms

Base (*Base*): one of the faces of the prism, often thought of as the surface on which the prism rests

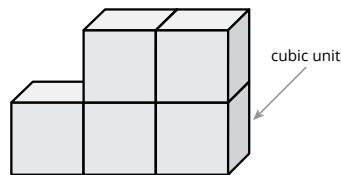


Bisect: divide into two equal parts

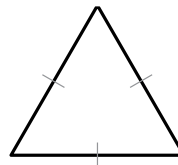
The diagonals of the parallelogram bisect each other.



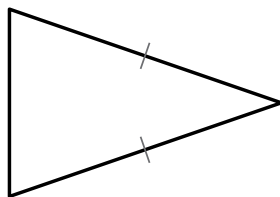
Cubic unit (*Unidad cúbica*): A unit for measuring volume. 1 cubic unit of volume is defined as the volume of a cube with side lengths of 1 unit.



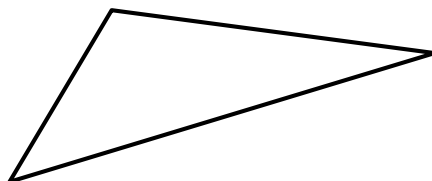
Equilateral triangle (*Triángulo equilátero*): A triangle with three congruent (equal) sides and three congruent (equal) angles. An equilateral triangle is a special type of isosceles triangle.



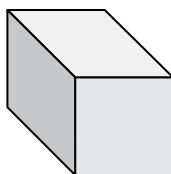
Isosceles triangle (*Triángulo isósceles*): a triangle with at least two congruent (equal) sides



Scalene triangle (*Triángulo escaleno*): a triangle with no congruent (equal) sides and no congruent angles

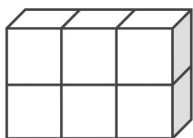


Rectangular prism (*Prisma rectangular*): a three-dimensional figure with six rectangular faces



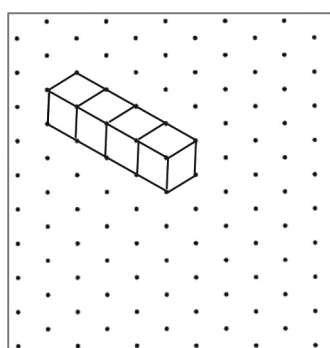
Models

Centimeter Cubes



Isometric Dot Paper

4 cubic units



Area Model

$$\begin{array}{l}
 \begin{array}{c} 1\frac{1}{3} \text{ in.} \\ 1 + \frac{1}{3} \\ \hline 3 \text{ in} \end{array} \\
 \begin{array}{l} (1 \times 3) + (\frac{1}{3} \times 3) \\ = 3 + 1 \\ = 4 \\ A = 4 \text{ square inches} \end{array}
 \end{array}$$

