



Dear Sixth Grade Families,

In Unit 7, students will work on the following sixth grade Common Core standards in the Geometry (G) domain:

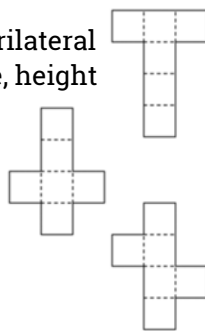
6.G.1	Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
6.G.2	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V=lwh$ and $V=bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
6.G.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems
6.G.4	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

Unit 7 Concepts:

- Draw polygons on a coordinate grid
- Find the area of triangles, quadrilaterals, and other polygons
- Find the volume of a rectangular prism with fractional side lengths
- Find surface area using nets

Unit 7 Vocabulary:

- Coordinate plane
- Polygons: triangle, quadrilateral
- Area: length, width, base, height
- Congruent
- Volume, capacity
- Cubic units
- Unit fraction
- Rectangular prism
- Surface area
- Net



Formulas for Volume of a Rectangular Prism

$$\text{Volume} = \text{length} \times \text{width} \times \text{height}$$

$$\text{Volume} = \text{base} \times \text{height}$$

Formulas for Area

$$\text{Area of a Parallelogram} = \text{base} \times \text{height}$$

$$\text{Area of a Trapezoid} = \frac{1}{2}(\text{base}_{\text{top}} + \text{base}_{\text{bottom}}) \times \text{height}$$

$$\text{Area of a Triangle} = \frac{1}{2}(\text{base} \times \text{height})$$

Ask questions like these to help your child become a productive mathematical thinker:

- How do you find the area of a complex polygon? Is there another way?
- Why is volume represented with cubic units?
- What's the difference between volume and surface area? Is that like something else you've studied?
- How does a net help you find the surface area of a solid figure?

Need a review? Check out our lesson videos on-line!

swunmath.com/student-videos

If you don't know the class's special name, ask your child's teacher.

We encourage you to talk with your child daily about what was learned in math class.

Thank you for your support!