# Solving Real-World Geometry Problems

CCSS MP.4 – Model with mathematics

## High School

- G-MG.1 – Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).
- G-GMD.3 – Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.

## Middle School

- 8.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.
- 7.G.6 – Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.
- 6.G.2 –Apply the formulas V = l w h and V = b h to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

## Elementary School

- 5.MD.5 – Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
- 4.MD.3 – Apply the area and perimeter formulas for rectangles in real world and mathematical problems
- 3.MD.7d – Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
- 2.MD.1 – Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- 1.MD.2 – Express the length of an object as a whole number of length units.
- K.MD.1 – Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.