

The Common Denominator

A Family Math Newsletter

Geometry Unit 10: Extending Perimeter, Circumference, and Area: Spatial Reasoning

Unit at a Glance



Students' experience with two-dimensional and three-dimensional objects is extended to include informal explanations of circumference, area and volume formulas. Additionally, students apply their knowledge of two-dimensional shapes to consider the shapes of cross-sections. The following topics will be studied:

Topic	Length	Geometry Text Section(s)
Topic A: Composite Figures	Academic: 1.5 (90-minute) lesson Honors: 1 (90-minute) lessons	9.1-9.3
Topic B: Effects of Changing Dimensions Proportionally	Academic: 1 (90-minute) lessons Honors: 1 (90-minute) lessons	9.5
Topic C: Solid Geometry	Academic: 1 (90-minute) lessons Honors: 1.5 (90-minute) lessons	10.1
Topic D: Surface Area of Prisms, Cylinders, Pyramids, and Cones	Academic: 1 (90-minute) lessons Honors: 1 (90-minute) lessons	10.4-10.5
Topic E: Volume of Prisms, Cylinders, Pyramids, and Cones	Academic: 2 (90-minute) lesson Honors: 2 (90-minute) lesson	10.6-10.7
Topic F: Spheres	Academic: 1 (90-minute) lesson Honors: 1 (90-minute) lessons	10.8

Resource Toolkit

Homework Help

Digital resources exist in the HMH online textbook that can support student learning outside of the classroom. To access these resources, students can log into HMH through BCPSone Digital Content, then select "Student Resources". The "Homework Helper" resource has a mini-lesson, then guided practice problems for students to complete that can help reinforce concepts that were learned in class. Also, check the "Videos & Activities" section where other beneficial resources can be found.

Khan Academy Videos

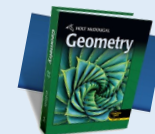
Topic A: [Area of Composite Shapes](#)

Topic C: [Ways to Cross-Section a Cube](#)

Topic D: [Cylinder Volume & Surface Area](#), [Surface Area Word Problem Example](#)

Topic E: [Volume of a Cone](#)

Topic F: [Volume of a Sphere](#)



Exploring Mathematics

Real World Connections

Review the definition of a [composite figure](#). Talk as a family about your school. Consider the floor plan of the school. A floor plan is a scale diagram of the arrangement of rooms in one story of a building. Together, create a sketch of a floor plan for your school. Discuss the different shapes that make up the floor plan to your school.

Extension Task!

With your child, work through the [Nine Colours Task](#). Discuss problem solving strategies, spatial reasoning strategies, and possible solution paths. Click [here](#) for the solution.



“Millions saw the apple fall, but Newton asked why.”

– **Bernard Baruch**