Rotation 3: Volume

Content Area: **Mathematics**
Course(s):
Time Period: **Default**
Length: **Rotation 3**
Status: **Published**

Summary

- Calculate and compare the volumes of cylinders, cones, and spheres.
- Use the relationships between height, radius, and volume to calculate missing dimensions.

Standards

MA.8.G.C.9	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

Materials

Desmos Grade 8 Unit 5

Lesson 10: Volume Lab

- I recognize the following three- dimensional shapes: cylinder, cone, cube, and sphere.
- I can estimate the volumes of different solids.

Lesson 11: Cylinders

- I can explain the parts of the formula for the volume of a cylinder.
- I can calculate the volume of a cylinder.

Lesson 12: Scaling Cylinders

- I can analyze the relationship between the height or radius of a cylinder and its volume.
- I can explain why the relationship between height and volume is linear but the relationship between radius and volume is not.

Lesson 13: Cones

- I can explain the relationship betwen the volume of a cone and the volume of a cylinder.
- I can use the formula for the volume of a cone.

Lesson 14: Missing Dimensions

- I can find missing information about a cylinder or cone if I know its volume and other information.
- I can compare and contrast strategies for finding infomration and a cone or cylinder.

Lesson 15: Spheres

- I can compare the volumes of a cone, a cylinder, a hemisphere, and a sphere.

- I can find the volume of a sphere when I know the radius or the diameter.

Assessment

- Observation
- Cool Downs
- Quizzes