



This is a resource from CPALMS ([www.cpalms.org](http://www.cpalms.org)) where all educators go for bright ideas!  
Resource ID#: 44523

Primary Type: Problem-Solving Task

# Use Cavalieri's Principle to Compare Aquarium Volumes

This task presents a context that leads students toward discovery of the formula for calculating the volume of a sphere.

**Use Cavalieri's Principle to Compare Aquarium Volumes (Microsoft Word):** This file includes the task and the related information in Microsoft Word format.

**Use Cavalieri's Principle to Compare Aquarium Volumes (PDF):** This file includes the task and related information in PDF format.

## General Information

**Subject(s):** Mathematics

**Grade Level(s):** 9, 10, 11, 12

**Intended Audience:** [Educators](#), [Students](#), [Parents](#)

**Suggested Technology:** Adobe Acrobat Reader, Microsoft Office

**Freely Available:** Yes

**Keywords:** Cavalieri's Principle, volume, sphere, cross-sections, cone, Florida Standards

**Instructional Component Type(s):** [Problem-Solving Task](#)

**Resource Collection:** Illustrative Mathematics

## Source and Access Information

**Contributed by:** Hannah Davis

**Name of Author/Source:** Hannah Davis

**District/Organization of Contributor(s):** Leon

**Is this Resource freely Available?** Yes

**Access Privileges:** Public

**License:** [CPALMS License - no distribution - non commercial](#)

## Aligned Standards

Name	Description
<a href="#">MAFS.912.G-GMD.1.2:</a>	Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.
<a href="#">MAFS.912.G-MG.1.1:</a>	Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder). ★