

Grade 8 - Volume of Cylinders, Cones and Spheres - Test

Common Core 8.G.C.9 · maths-pdf.fr/en/

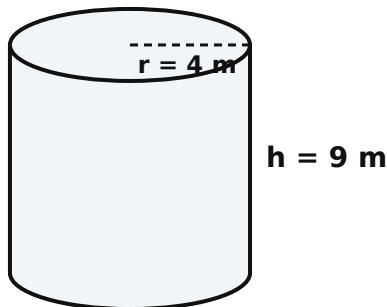
Name: _____ Class: _____ Date: ____/____/____

This 20-point test checks the volume of cylinders, cones and spheres and solving real-world volume problems (Common Core 8.G.C.9). Work alone, show every step, and write each final answer clearly. You have 45 minutes. Calculators are not needed unless a question says so.

About this test

- Grade: Grade 8
- Chapter: Volume of Cylinders, Cones and Spheres
- Standards: 8.G.C.9
- Time: 45 minutes
- Total: 20 points

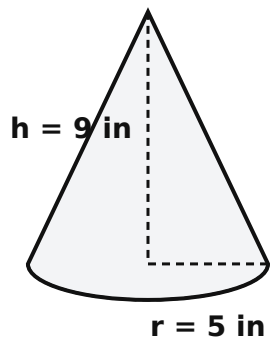
Question 1 - Cylinder [3 pts]



A cylinder.

Find the volume of the cylinder in terms of π , and then to the nearest tenth with $\pi \approx 3.14$.

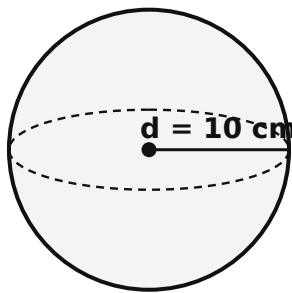
Question 2 - Cone [3 pts]



A funnel.

A funnel is a cone. Give its volume in terms of π .

Question 3 - Sphere [3 pts]



A sphere with diameter 10 cm.

The sphere has diameter 10 centimeters. Find its volume in terms of π .

Question 4 - Find a dimension [3 pts]

A cylinder has volume 200π cubic feet and height 8 feet. Find the radius.

Question 5 - Compare [2 pts]

A cone and a cylinder have the same radius and height. The cylinder has volume 90π . Find the volume of the cone and explain.

Question 6 - Combined solid [3 pts]

A toy is a cylinder of radius 3 cm and height 10 cm with a hemisphere of radius 3 cm on top. Find the total volume in terms of π .

Question 7 - Real world [2 pts]

A round birthday cake pan has diameter 10 inches and height 2 inches. How many cubic inches of batter does it hold? Use 3.14.

Question 8 - Explain [1 pt]

Explain why doubling the radius of a sphere multiplies its volume by 8.