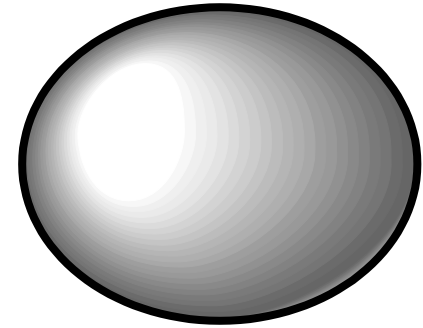
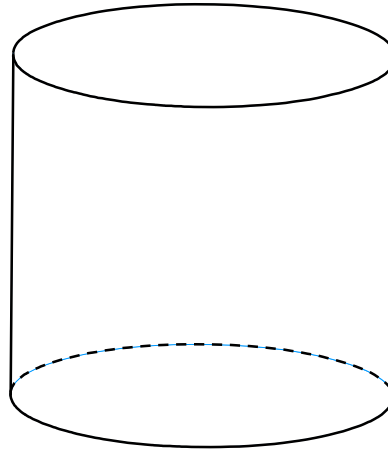
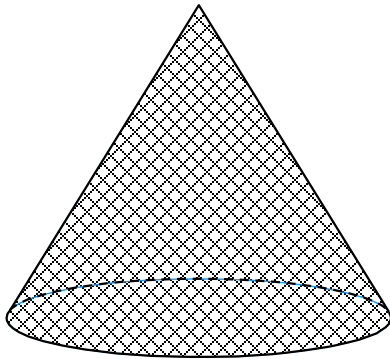


Volume of Pyramids, Cones & Spheres

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of contents](#)*

Given the same diameter and height for each figure, drag them to arrange in order of smallest to largest volume.



How many filled cones do you think it would take to fill the cylinder?

How many filled spheres do you think it would take to fill the cylinder?

Demonstration comparing volume of Cones & Spheres with volume of Cylinders

[click to go to web site](#)

Volume of a Cylinder

A cone is $\frac{1}{3}$ the volume of a cylinder with the same base area (B) and height (h).

(Area of Base x Height)

$$\text{Volume} = \pi r^2 h$$

Volume of a Cone

A cone is $\frac{1}{3}$ the volume of a cylinder with the same base area (B) and height (h).

$$\frac{1}{3} (\text{Area of Base} \times \text{Height}) \div 3$$
$$\frac{1}{3} (\text{Area of Base} \times \text{Height})$$

$$V = \frac{1}{3} \pi r^2 h$$

Volume of a Sphere

A sphere is $\frac{2}{3}$ the volume of a cylinder with the same base area (B) and height (h).

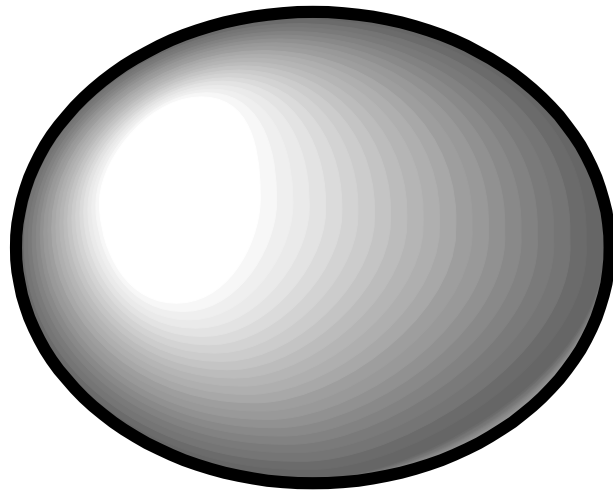
$$V = \frac{2}{3} (\text{Volume of Cylinder})$$

$$V = \frac{2}{3} (\pi r^2 h)$$

or

$$V = \frac{4}{3} \pi r^3$$

If the radius of a sphere is 5.5 cm, what is its volume?



$$V = \frac{4}{3}\pi r^3$$

$$V = \frac{4}{3}(3.14)(5.5)^3$$

$$V = 696.6\text{cm}^3$$



25 What is the volume of a sphere with a radius of 8 ft?



26 What is the volume of a sphere with a diameter of 4.25 in?