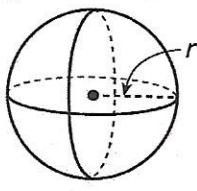


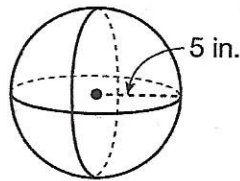
Spheres

To find the volume of a sphere, use the following formula.

<p>Sphere</p>  <p>A diagram of a sphere with a center point. A radius line is drawn from the center to the surface, labeled with the letter 'r'. The sphere is shown with a horizontal equator and a vertical meridian, with dashed lines indicating the hidden parts.</p>	$V = \frac{4}{3}\pi r^3$ <p>where r = radius $\pi \approx 3.14$</p>
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▶ Example

What is the volume of the sphere below?



Use the following formula.

$$\begin{aligned}
 V &= \frac{4}{3}\pi r^3 \\
 &= \frac{4}{3} \cdot 3.14 \cdot (5)^3 \\
 &= \frac{4}{3} \cdot 3.14 \cdot 125 \\
 &= 523.\bar{3}
 \end{aligned}$$

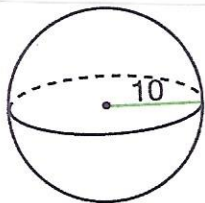
The volume of the sphere is approximately 523.3 in.³.

★ If I am given the diameter I _____

Examples

Find the volume
Round to the nearest tenth.

1)



$$V \approx \underline{\hspace{2cm}}$$

2)

A sphere has a diameter of 2 m.
What is the volume of the sphere?
Use 3.14 for π and round your
answer to the nearest tenth.

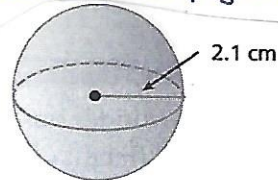
$$V = \underline{\hspace{2cm}}$$

3)

What is the volume of a beach ball
with a radius of 12 centimeters?

$$V = \underline{\hspace{2cm}}$$

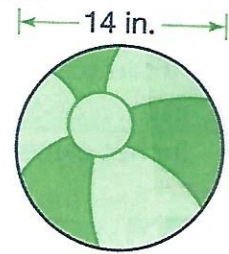
4) Find the volume. Keep your answer in terms
of π .



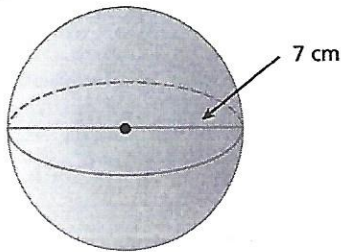
5)

A baseball has a diameter of 2.9 inches. Find the volume of the baseball.
Round your answer to the nearest tenth if necessary. Use 3.14 for π .

- 6) A beach ball has a diameter of 14 inches. If the beach ball is fully inflated, about how many cubic inches of air will it hold?

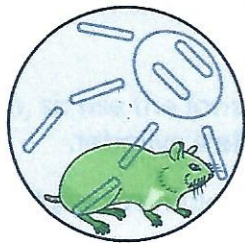


- 7) Find the volume to the nearest tenth



- 8) Erika bought a plastic run-around ball for her guinea pig.

← diameter →



If the volume of the ball is 288π cubic inches, what is the diameter of the ball?