

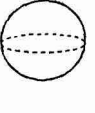


# Volume of Cylinders, Cones and Spheres Notes

Name: \_\_\_\_\_  
Hour: \_\_\_\_\_

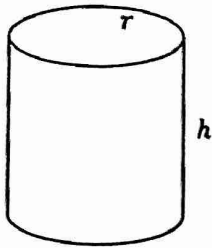
Directions: Calculate the volume of the cylinder, cone and sphere for the problems listed below. Label all of your answers with the appropriate units and show your work! Use 3.14 for  $\pi$ . Round your answers to the nearest tenth.

VOLUME PRACTICE	 Cylinder $V = \pi r^2 h$	 Cone $V = \frac{1}{3} \pi r^2 h$	 Sphere $V = \frac{4}{3} \pi r^3$
1) radius = 2 feet height = 4 feet	$V = 3.14 \times 2^2 \times 4$  $V = 50.24 \text{ ft}^3$	$V = \frac{1}{3} \times 3.14 \times 2^2 \times 4$  $V = 16.75 \text{ ft}^3$	$V = \frac{4}{3} \times 3.14 \times 2^3$  $V = 33.49 \text{ ft}^3$
2) radius = 4 feet height = 8 feet	$V = 3.14 \times 4^2 \times 8$  $V = 401.92 \text{ ft}^3$	$V = \frac{1}{3} \times 3.14 \times 4^2 \times 8$  $V = 133.97 \text{ ft}^3$	$V = \frac{4}{3} \times 3.14 \times 4^3$  $V = 267.95 \text{ ft}^3$
3) radius = 6 feet height = 12 feet	$V = 3.14 \times 6^2 \times 12$  $V = 1356.48 \text{ ft}^3$	$V = \frac{1}{3} \times 3.14 \times 6^2 \times 12$  $V = 452.16 \text{ ft}^3$	$V = \frac{4}{3} \times 3.14 \times 6^3$  $V = 904.32 \text{ ft}^3$
4) diameter = 10 in height = 4 in  $r = d \div 2$	$r = 5$ $V = 3.14 \times 5^2 \times 4$  $V = 314 \text{ in}^3$	$V = \frac{1}{3} \times 3.14 \times 5^2 \times 4$  $V = 104.67 \text{ in}^3$	$V = \frac{4}{3} \times 3.14 \times 5^3$  $V = 523.33 \text{ in}^3$

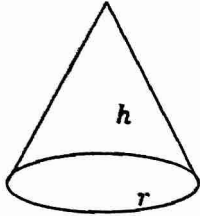
# Finding Volume

Name \_\_\_\_\_

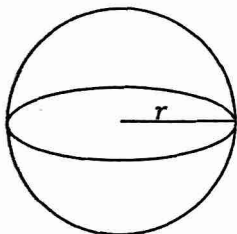
Answer the following questions either using  $\pi \approx 3.14$  or giving your answer in terms of  $\pi$ . Round your answer to the nearest hundredth where necessary.



1. Find the volume of a cylinder with a radius of 3 in and a height of 10 in.
2. Find the volume of a cylinder with a radius of 10 mm and a height of 2 mm.
3. Find the volume of a cylinder with a radius of 5 cm and a height of 15 cm.
4. Find the volume of a cylinder with a diameter of 22 m and a height of 5 m.
5. Find the volume of a cylinder with a diameter of 4 ft and a height of 1 ft.
6. Find the volume of a cylinder with a radius of 9 in and a height of 9 in.
7. Find the volume of a can of green beans with a radius of 3 cm and a height of 8 cm.
8. Find the volume of a cylindrical can of oatmeal with a radius of 8 cm and a height of 45 cm.
9. Find the volume of a cylindrical water bottle with a diameter of 4 cm and a height of 30 cm.
10. Find the volume of a can of Pepsi with a diameter of 2 in and a height of 3.5 in.
11. Find the volume of a water pipe with a radius of 0.75 ft and a length of 16 ft.
12. Find the volume of a straw used for drinking with a radius of 2 mm and a height of 170 mm.



13. Find the volume of a cone with a radius of 3 in and a height of 10 in.
14. Find the volume of a cone with a radius of 10 mm and a height of 3 mm.
15. Find the volume of a cone with a radius of 5 cm and a height of 15 cm.
16. Find the volume of a cone with a radius of 12 m and a height of 5 m.
17. Find the volume of a cone with a diameter of 4 ft and a height of 9 ft.
18. Find the volume of a cone with a diameter of 18 in and a height of 9 in.
19. Find the volume of a waffle cone for ice cream with a radius of 4 cm and a height of 12 cm.
20. Find the volume of a cone birthday hat with a radius of 2 in and a height of 9 in.



21. Find the volume of a funnel with a diameter of 10 cm and a height of 9 cm.
22. Find the volume of a sphere with a diameter of 6 in.
23. Find the volume of a sphere with a diameter of 18 mm.
24. Find the volume of a sphere with a radius of 6 cm.
25. Find the volume of a sphere with a radius of 12 m.
26. Find the volume of a sphere with a radius of 2 ft.
27. Find the volume of a sphere with a radius of 5 in.
28. Find the volume of a mini basketball with a radius of 3.5 in.
29. Find the volume of the Earth with a diameter of approximately 12,756 km.
30. Find the volume of the moon with a diameter of approximately 3475 km.
31. Find the volume of a gumball with a radius of 3 mm.