School786
AN ONLINE SCHOOL

Name: Due Date: Teacher: Parent Sign:

1. Find the volume of a cylinder with radius 5 cm and height 10 cm.

2. A cylinder has diameter 12 cm and height 8 cm. Find its total surface area.

3. Find the volume of a cylinder with radius 7 cm and height 14 cm.

4. Find the lateral (curved) surface area of a cylinder with radius 3.5 cm and height 20 cm.

5. A soda can has diameter 6 cm and height 10 cm. Find its volume. How many full 250 cm^3 servings does it contain?

6. Find the total surface area of a cylinder with radius 4 cm and height 9 cm.

7. A cylindrical water tank has radius 2 m and height 5 m. It is filled to a height of 3 m. Find the volume of water in the tank.

8. A cylinder has height 15 cm and volume 706.86 cm^3. Find its radius (to two decimal places).

9. A cake pan is a cylinder of diameter 20 cm and height 5 cm. What is its volume?

10. For a cylinder with radius 2.5 cm and height 12 cm, find (a) the lateral surface area and (b) the total surface area.

11. A cylinder has radius 10 cm and height 0.5 m. Find its volume in liters.

12. A cylindrical container has radius 9 cm and height 9 cm. Find the surface area to be covered if the container is open at the top (i.e., lateral area + bottom).

13. Find the total surface area of a cylinder with radius 8 cm and height 15 cm.

14. A hollow tube is formed by a larger cylinder (radius 7 cm, height 10 cm) minus a concentric inner cylinder (radius 3 cm, same height). Find the hollow volume.

15. A solid is made by putting a cone (radius 4 cm, height 6 cm) on top of a cylinder (same radius, height 12 cm). Find the total volume.

16. Find the volume of a sphere with radius 6 cm.

17. Find the volume of a sphere with diameter 10 cm.

18. Find the volume of a sphere with radius 4.5 cm.

19. A basketball has diameter 24 cm. Find its volume.

20. A sphere has volume 288? cm^3. Find its radius.

21. A metal sphere of radius 3 cm is melted and recast into a right circular cone of radius 6 cm. Find the height of the cone.

22. A sphere of radius 5 cm fits exactly inside a cylinder so that the sphere touches the top and bottom and the sides. What are the cylinder dimensions, and what is the difference between the cylinder's volume and the sphere's volume?

23. An ice?cream scoop forms a sphere of radius 3 cm. How many full scoops can be made from a pint (473 cm^3)?

24. Find the volume of a glass ornament that is a sphere of radius 7 cm.

25. Find the volume of a sphere with diameter 14 cm.

26. Find the volume of a cone with radius 5 cm and height 12 cm.

27. Find the volume of a cone with diameter 10 cm and height 15 cm.

28. A right cone has radius 4 cm and slant height 9 cm. Find its volume. (Hint: find the height first.)

29. An ice?cream cone has radius 3 cm and height 9 cm. A single scoop on top is a hemisphere of radius 3 cm. Which holds more – the cone or the hemisphere – and by how much?

30. A cone?shaped water tank has radius 2 m and height 6 m (vertex at the bottom). It is filled with water to depth 4 m. Find the volume of water in cubic meters.

31. A cylinder has volume 1500 cm^3 and radius 5 cm. Find its height.

32. A cone has volume 500 cm^3 and radius 5 cm. Find its height.

33. A sphere has volume about 523.6 cm^3. Find its radius.

34. A soup can has radius 3.5 cm and height 10 cm. How much paper (area) is needed to wrap a label around the side (lateral surface only)?

35. A cylindrical water tank (open at the top) has radius 2 m and height 3 m. What interior surface area must be painted (sides + bottom)?

36. Find the volume of a cone with radius 6 cm and height 9 cm.

37. A solid object is a cylinder (radius 6 cm, height 10 cm) with a hemisphere (radius 6 cm) attached to the top. Find the total volume.

38. A sphere of radius 6 cm is inside a cylinder of radius 6 cm and height 12 cm. Find the volume of the space between the cylinder and the sphere.

39. A cylinder and a cone have the same base radius 4 cm and the same height 9 cm. Find both volumes and the ratio cone : cylinder.

40. A cylindrical can has diameter 8 cm and height 12 cm. If small solid spheres of radius 1 cm are melted into the can's volume, about how many spheres (by volume) would be equivalent?

41. A cone has radius 4 cm and height 9 cm. If it is filled with liquid to half its height, what fraction of the full cone's volume is that, and what is the filled volume?

42. A cylindrical well has radius 0.75 m and depth 10 m. If water is pumped out to lower the depth from 10 m to 6 m, how much water (volume) was removed?

43. A solid sphere's radius grows from 5 cm to 7 cm. By how much does the volume increase?

44. A conical tent has base radius 3 m and height 4 m. What is the interior volume of the tent (in cubic meters)?

45. A cylindrical tub has radius 60 cm and height 40 cm. How many liters does it hold? If water costs $0.003 per liter, how much to fill it?

46. A sphere fits exactly inside a cube of side 10 cm. Find the volume of the sphere and the percentage of the cube's volume occupied by the sphere.

47. Find the volume and total surface area of a cylinder with radius 14 cm and height 20 cm.

48. A cone has radius 7 cm and height 10 cm. If both radius and height are doubled, by what factor does the volume change? What is the new volume?

49. A cube has side 10 cm and contains a sphere that just fits inside it. What is the sphere's volume and what percent of the cube does it occupy? (Same idea as #46; compute.)

50. A metal cylinder has radius 4 cm and height 10 cm. It is melted and recast into identical solid spheres each of radius 2 cm. How many spheres can be made?