Volume & Surface Area: Word Problems

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_ Block\_\_\_\_\_\_\_\_

1. The volume of a rectangular prism is 64 cubic centimeters. The length of the prism is 8 cm and the width is 4cm. What is the height?
2. Thelma and David built a recycling bin that is 6 feet wide, 12 feet long, and 14 feet high. How much trash can fit inside of the bin? How much plastic is needed to make the bin?
3. The cylindrical canister of a fire extinguisher has a radius of 4 inches and is 12 inches high. How many cubic inches can it hold?
4. A soup can has a diameter of 8 cm and a height of 10.5 cm. How much metal is needed to make the can? How much paper is needed for the label?
5. Josh is wrapping a box that is 5 feet long 14 feet wide and 3 feet tall with wrapping paper. How much wrapping paper will he need to cover the box?
6. For a project, Kenneth has to cover all sides of a square based pyramid with cloth (excluding the base). The pyramid has the dimensions shown below. How much cloth will Kenneth need to cover the sides of the pyramid?

15 in 12in

11in

1. Cindy went to Maggie Moo’s for an ice cream cone after school. The ice cream cone had a radius of 1 inch, a height of 2 ½ inches, and a slant length of 3 ½ inches, how much ice cream could the cone hold?
2. Brian is building a sand box that is 6 feet wide, 3 feet long, and 15 inches high. How many cubic feet of sand with the box hold? If the length of the sandbox is doubled, what would happen to the amount of sand the box can hold?
3. Jake found an old toy pyramid while he was cleaning out his closet. To help him finish cleaning out his closet, he placed all his old toys in the pyramid. If the pyramid had a height of 12 inches, a slant length of 15 inches, and a side base of 10 inches, how much could the pyramid hold?
4. Adam is building a rectangular planter without a top. The planter will be 7 inches wide, 16 inches long, and 10 inches high. How much wood is needed to make the bottom and sides of the planter?
5. A cylinder has a diameter of 8 inches and a volume of 301.44 cubic inches. What is the height?
6. A cylinder has a height of 10 feet and a volume of 282.6 cubic feet. What is the radius? What is the diameter?
7. The surface area of a cube is 216 square inches. What is the length of each side of the cube?
8. The following is a picture of the play house John wants to build. How much paint will he need cover the entire house? How much space will there be inside the house?

