Name _____ Date _____

Volume

Complete.

1. An underground chamber has been discovered in an old mansion. The chamber is thought to have been used for storing ammunition. The dimensions of the chamber are 14 feet by 8 feet by 8 feet. An old ammunition crate was also found in the chamber and it had dimensions of 1 foot by 1 foot by 3 feet. What is the maximum number of ammunition boxes of that size that could be put in the underground chamber?	2. Captain Howard had his crew paint the smokestack on his ship the Sea Snail. The smokestack is shaped like a cylinder and is 40 feet 3 inches tall. The radius of the smokestack's base is four feet. What is the surface area of the smokestack?
3. A pillar from an ancient city was found buried in the ground. It had a cross-sectional shape like that shown in the figure. If the area of the cross section is seventeen and three hundredths square meters, and the pillar was eighteen and nine tenths meters tall, what was the total volume of stone contained by the pillar? 	4. If you have four 5-in by 5-in x 5-in aluminum cubes and superglue them together in a row, what is the surface area of the resulting shape made by the four cubes?
5. Cody has a great idea. He wants to fill a box with hot liquid chocolate and let it cool until it solidifies. The box is shaped like the figure and has a bottom area of 14 in^2. If he has 22.4 cubic inches of chocolate and he wants the box to be as tall as possible, how big should he make the box? 	6. Captain Howard had his crew paint the smokestack on his ship the Sea Snail. The smokestack is shaped like a cylinder and is 35 feet 5 inches tall. The radius of the smokestack's base is five feet. What is the volume of the smokestack?