

Name: _____ Period: _____

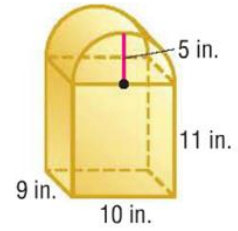
Score: _____ / _____
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HW 9-2: Composite Figures

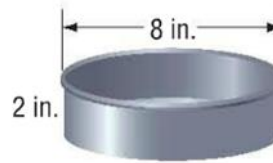
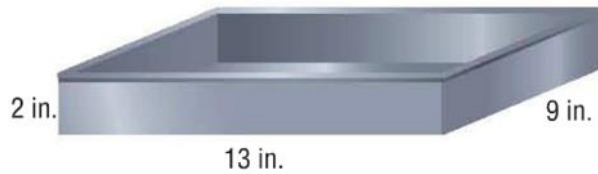
Round all answers to the nearest tenth. Label units!

1.

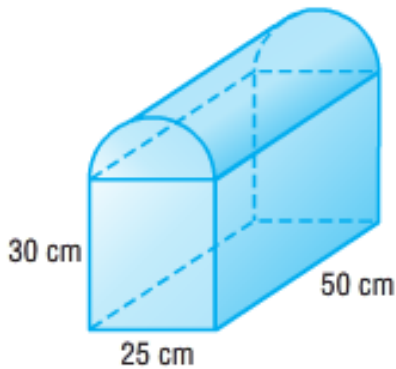
Charlotte wants to make a mailbox like the one shown. What is the volume of the mailbox? Round to the nearest tenth.



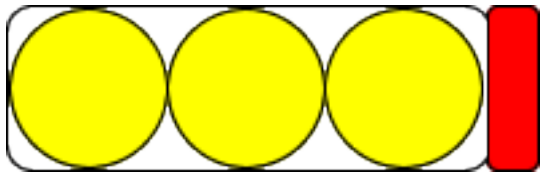
2. Which will hold more cake batter, the rectangular pan or two round pans? Explain your reasoning to a classmate.



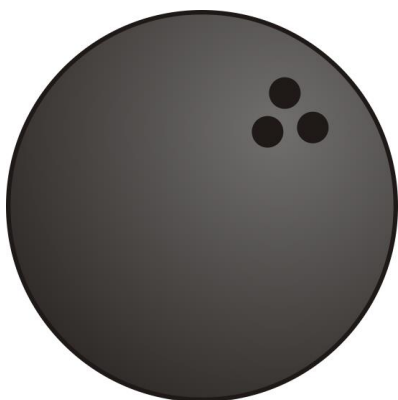
3. What is the volume of the given composite figure?



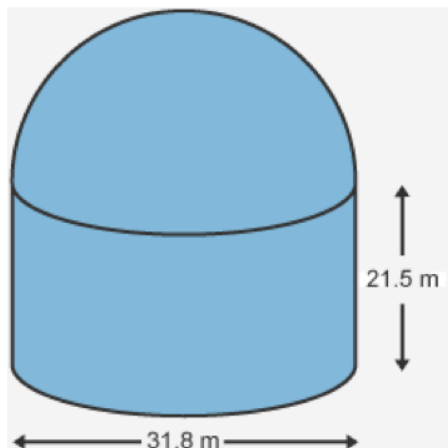
4. Tennis balls are usually sold in a cylinder. The diameter of a tennis ball is 2.7 inches. The cylinder has a radius of 1.4 inches and it is 8.5 inches long. What is the volume of air inside the cylinder when it is filled with 3 tennis balls?



5. A bowling ball has a diameter of 8.5 inches. Each hole drilled in the ball is 1 inch deep and has a radius of $\frac{1}{2}$ inch. What is the volume of a bowling ball with 3 cylindrical holes drilled in it?



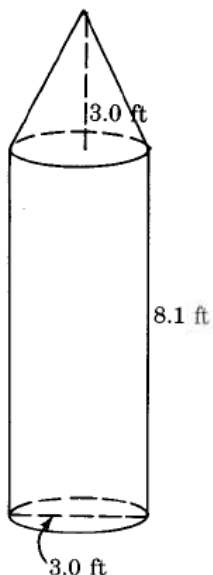
6. A science observatory is shown to be comprised of a cylinder and a hemisphere on top. Find the volume of the inside of the science observatory.



7. Two different employees are dishing the ice cream at the “Big Scoop Ice Cream Parlor”. One of them places a single sphere of ice cream perfectly in a cone with diameter of 3 inches. The other likes to pack the entire cone full to the brim of ice cream, and then place a hemisphere of diameter 3 inches on the top. If the height of the cone is 5 inches, how much more ice cream do you get by having the second employee serve you?



8. The world’s largest crayon ever made is shaped like the picture below having a cylinder that is sharpened to form a cone at the top. What is the volume of the crayon?



9. A roll of paper towel has an empty cylinder through the center. The radius from the center to the edge of a brand new roll is 4 inches. The radius of the cardboard center is 1 inch. If the paper towel roll is 12 inches long, what is the actual volume of paper towel in the roll?



10. A grain hopper is used for storage on a farm. It is a cylinder with a cone at the top and another at the bottom. The radius of the cylinder shaped piece is 4 yards, and the height of it is 10 yards. If the height of the top cone is one yard, and the bottom cone has a height of 2 yards what is the total volume of the grain hopper?



11. An ice cream cone is 9 cm deep (height) and 4 cm across the top (diameter). A single spherical scoop of ice cream 4 cm in diameter is placed in the cone. If the ice cream melts into the cone, will it overflow? Explain how you know.



12. A wedding cake is stacked in three separate layers. Each layer has the same height of 5 inches. The top layer has a radius of 3 inches, and each layer underneath has a radius that is 1 inch larger than the layer directly on top. What is the total volume of the wedding cake?

