

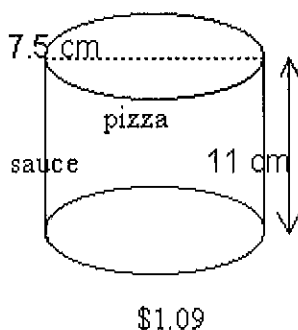
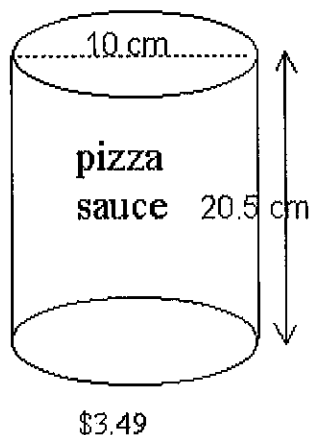
Name: _____

Date: _____ Class: _____

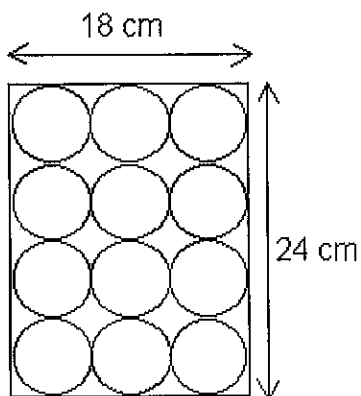
Primary: _____

Volume and Surface Area word problems

1. If both of these cans of pizza sauce are cylinders, which is the better buy?

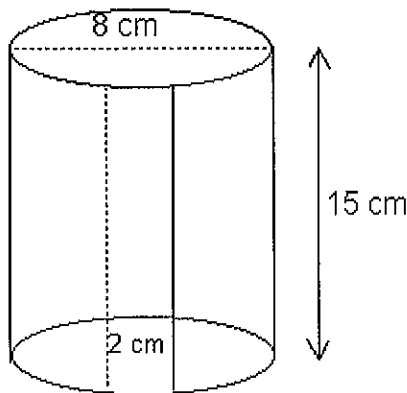


2. Cans of soup are often packed in boxes as shown below. Calculate the area that is wasted in between all of the cans.

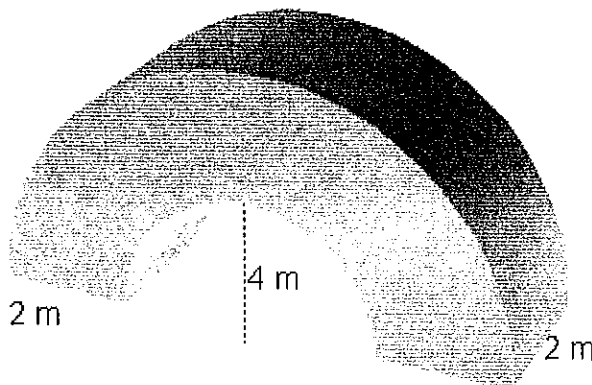


3. A cubic tank with 4.6 M edges is filled with water. How much water will be left in the tank if some is drained off to fill a cylindrical tank with a radius of 2.2 M and a height of 4.6 M?
4. How much cat food would fit into a can that has a height of 14.5 CM and a diameter of 9 CM? How much paper (in cm^2) would you need to make the label?

5. A birthday gift is 55 CM, 40 CM wide, and 5 CM high. The sheet of paper you want to use to wrap it measures 75 CM by 100 CM. is the paper large enough to wrap the gift? Explain.
6. What happens to the surface area of a rectangular prism if all three of its dimensions are doubled? Tripled?
7. The volume of a rectangular prism is 24 CM^3 . Find two other shapes that have the same volume. What are their dimensions?
8. A soup can has 2 CM of overlap. Find the surface area of the label.



9. A square pyramid has a base with an area of 40 CM^2 and a volume of 100 CM^3 . What is the height of the pyramid?
10. Three identical tennis balls with an 8 CM diameter are stacked in a cylindrical container. For this container, calculate
 - a) volume
 - b) surface area
11. What volume of concrete is required to build this footbridge?



12. A ramp shaped like a triangular prism is 2.5 M wide, and reaches a loading dock 1.2 M high. The ramp starts 3 M from the dock. All sides of the ramp are to be covered with pressure-treated plywood. Calculate the amount of plywood sheathing required to cover the ramp.

PROBLEM OF THE WEEK:

Do **TWO** of the following questions. This assignment is to be handed in for 10 marks on Monday.

1. A donut shop has two different sizes of donuts. The regular donuts have a diameter of 12 CM with a 3 CM hole, and the minidonuts have a 6 CM diameter with a 1.5 CM hole. The price of a regular donut is 70 cents, and minidonuts sell for 30 cents each. Each donut is 3 CM thick. Which donut is the better buy?
2. Ace pool company sells portable spas as shown. The inside diameter of the spa is 8' and the depth is 3' 6". The sides and the bottom are each 4" thick.
- calculate the total amount of vinyl required for the spa (on both the interior and the exterior).
 - The sides and the bottom of the spa are filled with a dense foam material. Calculate the volume of foam required.
 - If the spa is to be filled with water to within 8" of the top, how much water does the spa hold?
3. create 2 different cylinders from a 8 1/2" by 11" sheet piece of paper, one rolled lengthwise, the other widthwise (do not worry about/include making the base). Will the containers hold the same amount of popcorn?

