

Name _____

Date _____

Open-ended Task: Geometry Chapter 9

Directions:

To receive full credit you must do the following:

1. Show OR describe each step of your work, even if you did it in your head (“mental math”) or used a calculator,
AND
2. Write an explanation stating the mathematical reason(s) why you chose each of your steps.

Question: You work in the packaging department of a company that makes soup. The standard soup can is 4 inches high and has a diameter of 3 inches. Your department is asked to design a new can that will hold the same amount of soup but the new can should be 1 inch taller.

A. Find the volume of the old can.

B. Explain what you think will happen to the diameter of the soup can when its height is increased.

C. Find the diameter of the new soup can.