

# Project Measurements Sheet for Pop Bottle

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Directions:** After you finish your bottle project, use a tape measure or string and ruler to get measurements. Then fill out this sheet as accurately as possible. Don't forget the units (inches, centimeters).

1. **What is the largest circumference of your bottle?**

Bottle: \_\_\_\_\_

2. **What is the circumference of the mouth of the bottle?**

Mouth: \_\_\_\_\_

3. **What fraction of the largest circumference is the circumference of the mouth of your bottle?**

Fraction: \_\_\_\_\_

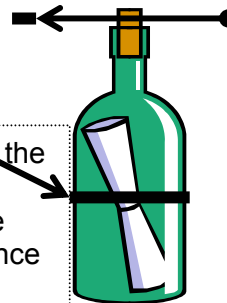
*Example:* Largest Circumference = 12 in

$$\frac{3}{12}$$

$$\frac{\cancel{3}}{\cancel{12}} \quad \begin{matrix} 3 \\ 3 \end{matrix}$$

To find the fraction that the mouth is of the largest circumference we place the mouth's circumference over the largest circumference. Then we reduce, if possible.

$$= \frac{1}{4}$$



*Example:* Circumference of Mouth = 3 in

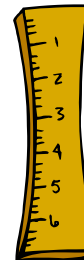
4. **What is the perimeter of the longest cut surface on your bottle?**

Perimeter: \_\_\_\_\_

*Example:*



...then you would measure along the cut you made.



Discuss how you can get the **most accurate** measurement. What tools can you use?

**5. Measure the volume—How much fluid or air the bottle can hold.**

Can you think of ways to do this?

One way is with water and a water measuring device, like a graduated cylinder.

Another way to measure volume is a sum of the approximations of the base x height of the bottle, plus the neck, plus the curved part between the bottle and the neck.

Of course, if your project is not a full bottle, the volume might only be, say

$\frac{1}{2}$  liter, or 500 ml.

Show your work here:

Volume of my project is: \_\_\_\_\_

Ratio of project volume to the whole volume of the pop bottle: \_\_\_\_\_

**6. Now do a “scale drawing of your project, on a ratio of 1” on paper equals 4” on your actual project:**

Show your work here: