**Hands on Activity- Volume**

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

Have you ever been asked to guess how many jellybeans are in a container and the person with the closest guess wins a prize? Today we will be performing an activity dealing with this dilemma. By the end of this activity you should have the knowledge to help you win the contest almost every time.

**Materials:**

* Starbursts
* Measuring cup and four other “regular objects”
* Ruler and scissors
* String
* Calculator

**Procedure:** (Make all measurements to the nearest half of an inch)

**Step 1:**

1. Measure the appropriate sides of the orange cup (measuring cup) and find its volume. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Then count how many Starbursts can fit in the measuring cup. \_\_\_\_\_\_\_\_\_\_\_\_\_
3. Create a ratio of the number of Starbursts and volume to use for the rest of the activity. \_\_\_\_\_\_

**Step 2:**

1. Measure the appropriate sides of object #1 and find its volume. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Set up a ratio of the number of Starbursts(x) and the volume. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Find the number of starbursts within object #1 using ratios. (round to the nearest whole) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Count how many starbursts are actually in object #1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Calculate the percent of error. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 3:**

1. Measure the appropriate sides of object #2 and find its volume. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Set up a ratio of the number of Starbursts(x) and the volume. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Find the number of starbursts within object #2 using ratios. (round to the nearest whole) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 4:**

1. Measure the appropriate sides of object #3 and find its volume. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Set up a ratio of the number of Starbursts(x) and the volume. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Find the number of starbursts within object #3 using ratios. (round to the nearest whole) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 5:**

1. Measure the appropriate sides of object #4 and find its volume. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Set up a ratio of the number of Starbursts(x) and the volume. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Find the number of starbursts within object #4 using ratios. (round to the nearest whole) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Other Questions:**

1. What do you think accounts for the percent of error?
2. Do you think the number of starbursts you calculated is accurate? Why or why not?
3. Why do you think that some objects with larger volumes contain less starburst than objects with smaller volumes?

**Connections:**

The local elementary school wants to put a sandbox in their playground. They are wondering how many pounds of sand they need to purchase to fill the sandbox with dimensions 5 feet-x- 5 feet -x- 2 feet. They found that one pound of dry sand has a volume of .16 feet3. How many pounds of sand will the school need to purchase to fill the sandbox?