Name_____ Date_____ Lab#_____
Lab Partner_____

# Density of Sand

**I. Objective:** to investigate the density of sand

**II. Materials and Equipment:**

1. 250mL Beaker
2. 100 mL Graduated Cylinder
3. Balance

**III. Procedure**

1. Mass a dry, clean 100 mL graduated cylinder.
2. Pick up sand from your teacher in your 250mL beaker.
3. Add10.0 mL of sand to your graduated cylinder and record the mass.
4. Add another 10.0 mL and record.
5. Repeat step 3, up to 90.0 ml.

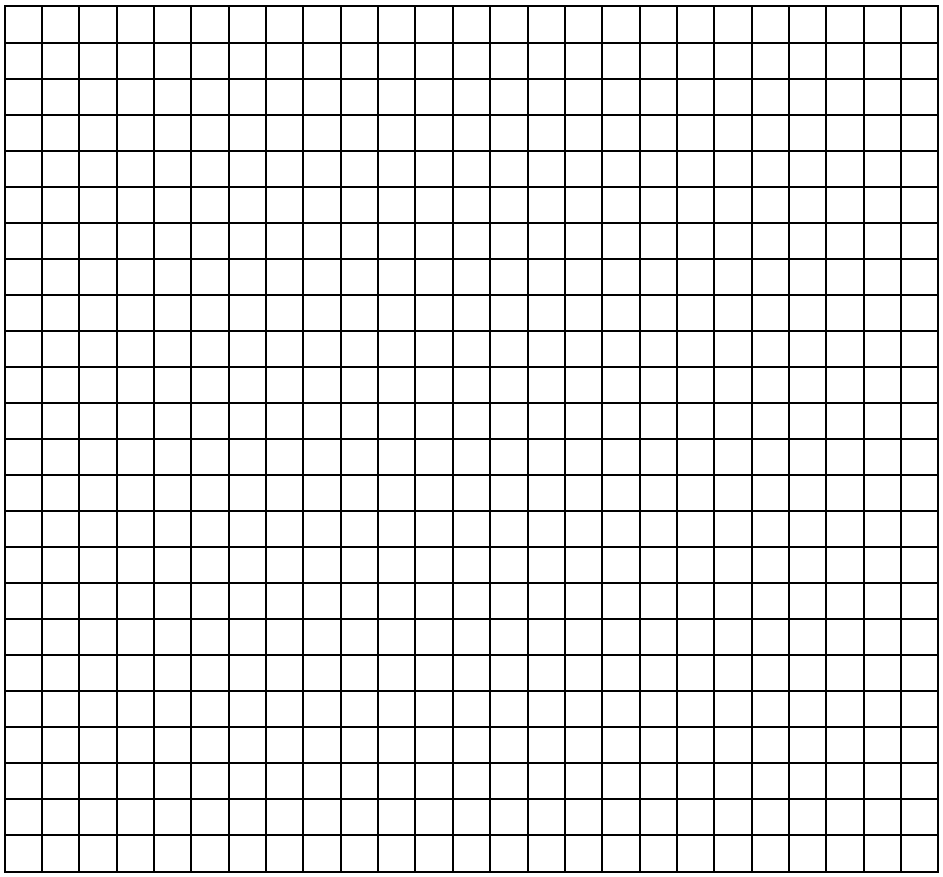
**IV. Data and Calculations:**

| Mass of sand and graduated cylinder-- | Mass of graduated cylinder= | Mass of sand | Volume | d=m/v | Density |
|---|---|---|---|---|---|
| 0g | | ---------- | 0 | ---------- | -------- |
| | | | 10.0mL | | |
| | | | 20.0mL | | |
| | | | 30.0ml | | |
| | | | 40.0mL | | |
| | | | 50.0mL | | |
| | | | 60.0mL | | |
| | | | 70.8mL | | |
| | | | 80.0mL | | |
| | | | 90.0mL | | |
| | | | | | |

**Add up all 9 densities_____**

**Average(divide by 9)_____**

**Graph**



1. Label your axis with the proper units (independent X-axis, dependent Y-axis). Independent you control. Dependent is what you record.
2. Use a proper scale.
3. Plot your data.
4. Draw a best-fit line. (<u>do not</u> connect the dots, 1 straight line that represents all the points)

**V. Questions:**

Determine the slope. $slope = \frac{\Delta Y}{\Delta X}$

1. How do the densities of all the samples of sand compare?

2. According to your graph what will be the mass of 45.0 mL of sand?

3. According to your graph what will be the volume of 65.0 g of sand?

4. How does the slope of the graph relate to you average density?

**VI. Conclusion**