

Name: _____

Date: _____

Procedure:

For parts 1-3, use a ruler to make the necessary measurements.

For parts 4-9, use the meter stick to make the necessary measurements.

In part 10, fill a graduate cylinder with 50.0 mL of water. Record this as the initial volume. Find an irregularly shaped object from the box in front of the room. Place the object into the cylinder and record the water level as final volume in 11.

In numbers 12-14, use a ruler to find the dimensions of an aluminum block.

Record the volume of copper sulfate (blue solution) in the burets labeled A through D.

Record the mass of the blocks in numbers 20-22.

Be sure to include units in all answers! Remember to estimate the final digit of each measurement.

1. Length of text book	<u>22.85 cm</u>
2. Width of text book	<u>3.42 cm</u>
3. Height of text book	<u>36.11 cm</u>
4. Your height	<u>174.39 cm</u>
5. Your partner's height	<u>163.92 cm</u>
6. Length of desk	<u>82.98 cm</u>
7. Length of room	<u>15.9847 m</u>
8. Width of room	<u>13.9014 m</u>
9. Height of room	<u>5.1105 m</u>
10. Initial volume	<u>52.1 mL</u>
11. Final volume	<u>74.8 mL</u>
12. Length of block	<u>2.88 cm</u>
13. Width of block	<u>3.11 cm</u>
14. Height of block	<u>2.97 cm</u>
15. Volume in buret A	<u>19.45 mL</u>
16. Volume in buret B	<u>28.45 mL</u>
17. Volume in buret C	<u>34.39 mL</u>
18. Volume in buret D	<u>41.06 mL</u>
19. Mass of aluminum block	<u>89.34 g</u>
20. Mass of copper block	<u>164.76 g</u>
21. Mass of steel block	<u>288.45 g</u>

Calculations:

Use the data recorded to find the following. Please show your work.

The volume of the irregularly shaped object

The volume of the classroom

The area of the textbook

The average volume of the burets

The volume of the aluminum block

The difference between your height and your partner's height

The average mass of the metal blocks

Questions:

1. Define the word precision below. Which instrument used in this experiment (based on the data) had the least precision? How do you know?

2. Why would you use a meter stick used in parts 4-5 and not parts 1-3?