

Chemistry 10H

Worksheet: Measurements, certain and uncertain digits

Mrs. Altman

Name:

1. With your lab group, do the following:

- Obtain three graduated cylinders (one will have water in it)
- Record the volume of the sample of water below to the proper level of precision in the space below
- For each measurement, indicate which digit(s) are certain and which digit is uncertain

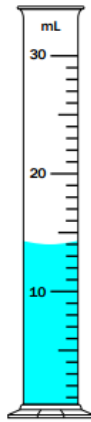
2. Are your measurements consistent with one another? Why or why not?

3. Which of the three graduated cylinders will give you the most precise measurement? Which will give you the least?

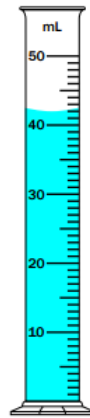
4. Identify which place (i.e. hundredths, ones, etc.) is uncertain in each of the measurements from the graduated cylinder.

5. For the following, record your measurement to the proper level of precision. Indicate which digit is the uncertain digit (for example, if the measurement is 13.5 mL, write "tenth place").

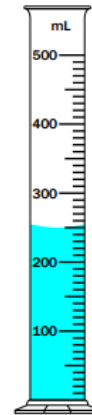
(a)



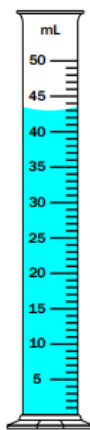
(b)



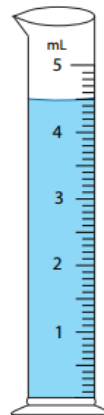
(c)



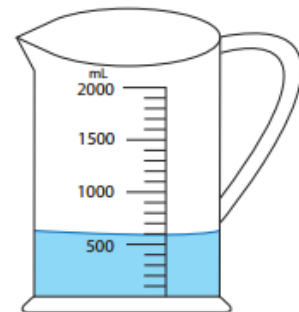
(d)



(e)



(f)



6. What does it mean for a digit to be certain? What does it mean for a digit to be uncertain?

7. What are the SI units for the following:

(a) mass

(b) volume

(c) temperature

(d) time

(e) length