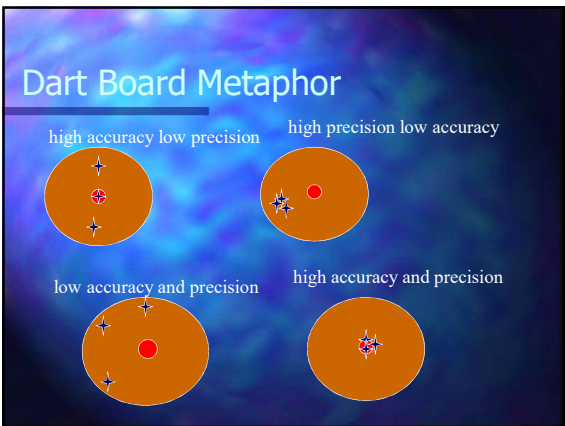


Accuracy and Precision

Difference between accuracy and precision

- Accuracy- how close you are to the actual answer
- Precision- how close all of your answers are to each other
- Accuracy is a measure of your lab technique, precision is a measure of your ability to duplicate what you just did



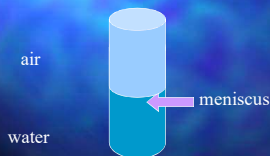
Measuring accurately

- always report all numbers given on a digital readout (Do NOT round)
- Do NOT add or delete zeros from the end!
- Make sure your reading is stable!
- Always read your equipment as accurately as you can (take your time, get close to the instrument).

Using a Graduated Cylinder.

Pour the liquid in a graduated cylinder and read from the meniscus.

The water will “grip” to the edges and form a depression in the middle, the lowest point of this curve is the meniscus.



ALWAYS PUT YOUR HEAD AT THE SAME LEVEL AS THE MENISCUS

Reading between the lines

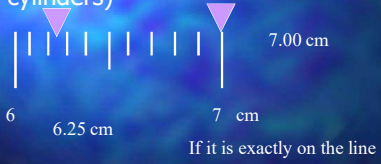
- Estimate one place on non digital equipment. (rulers, graduated cylinders)



If it is exactly on the line

Reading between the lines

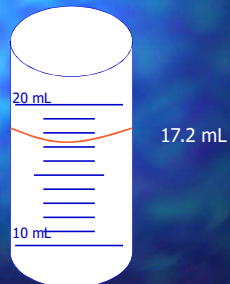
- Estimate one place on non digital equipment. (rulers, graduated cylinders)



Reading between the lines



Graduated Cylinder



What's the difference

- between 6.6 cm and 6.60 cm
- The difference is how accurately you were able to measure.
- More accuracy is always better but you can NEVER be exact
- You must report how accurate you were.

Measuring precisely

- If possible always measure three times
- If one measurement isn't close to the others always measure again.
- It is always a good idea to have your lab partner take the same reading as you to make sure you are reading it correctly.
