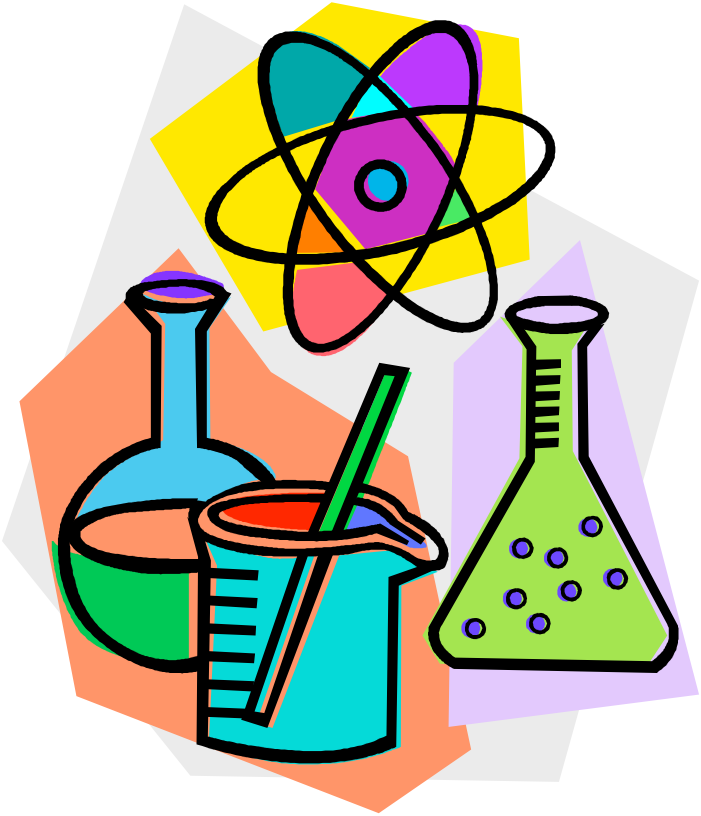


Precision vs. Accuracy

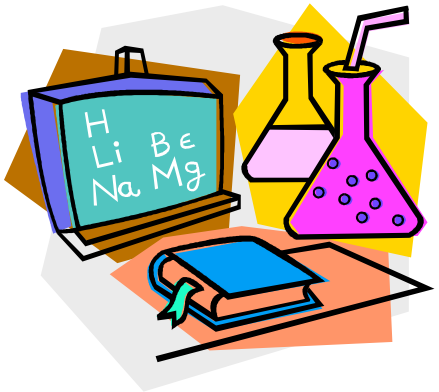
Measurement in Science

In Science, we want measurements to be both accurate and precise.

What is the difference between accurate and precise?

Accuracy is a measure of rightness.

Precision is a measure of exactness.

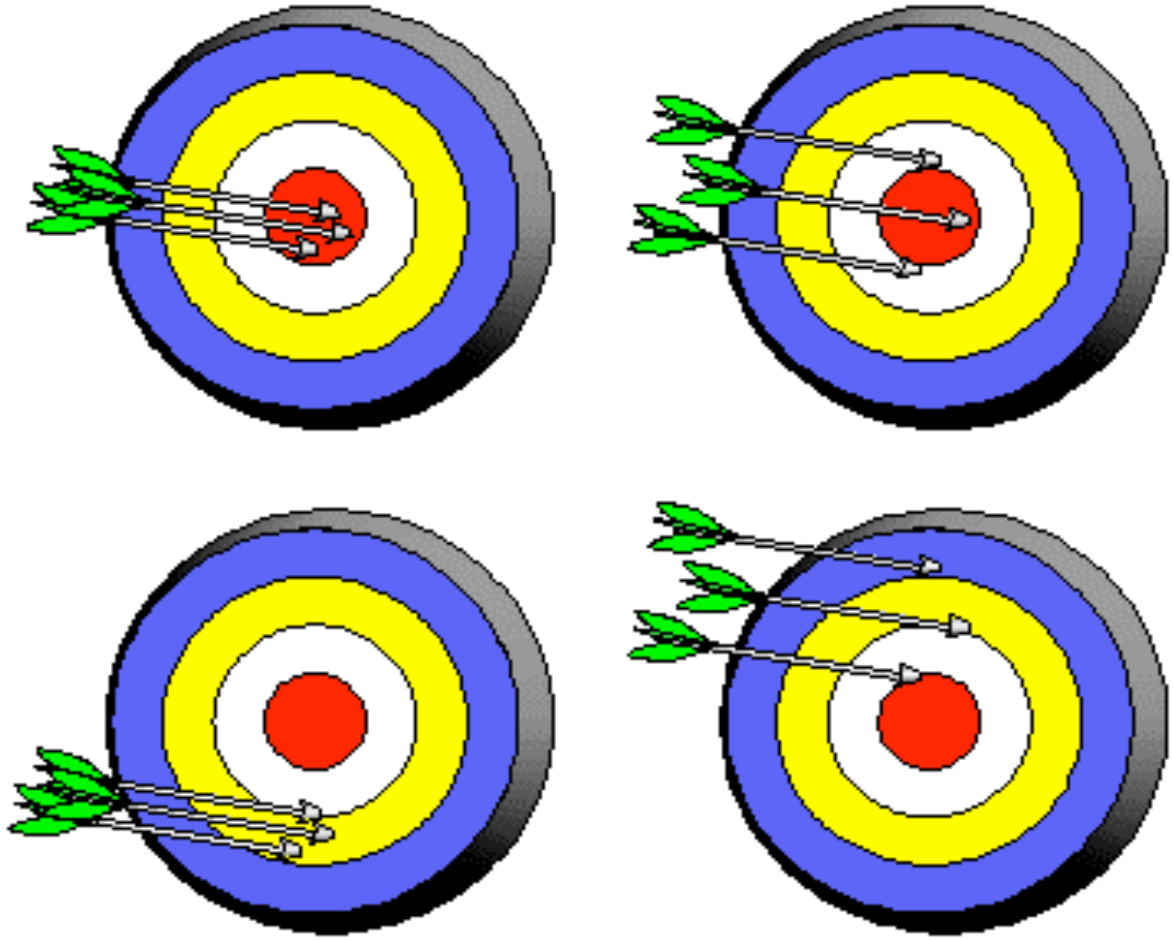


Precision vs. Accuracy

- **Accurate means "capable of providing a correct reading or measurement." A measurement is accurate if it correctly reflects the size of the thing being measured.**

- **Precise means “repeatable, reliable, getting the same measurement each time.”**

Precision vs. Accuracy

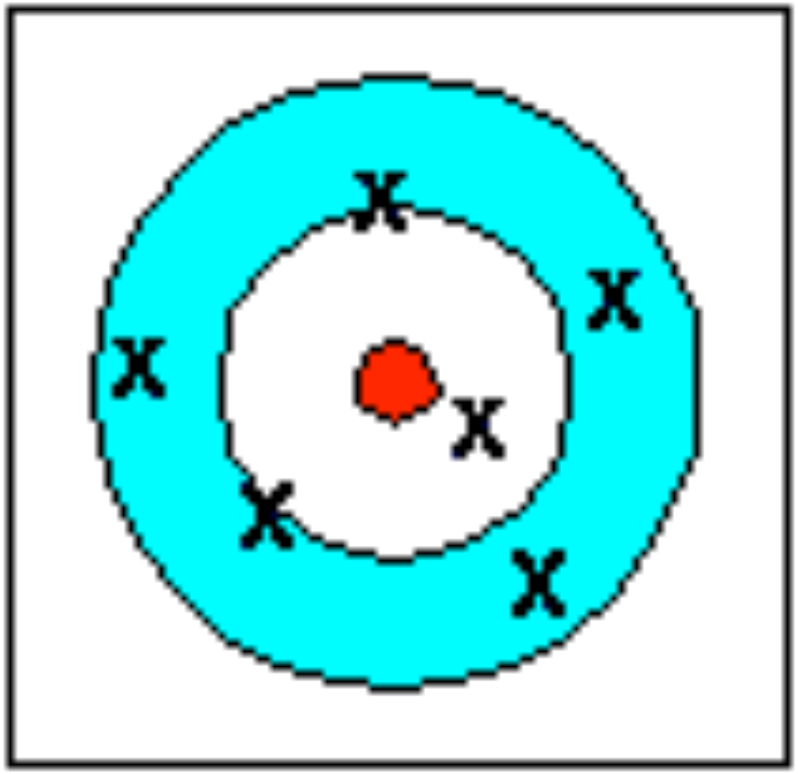


Precision vs. Accuracy

- **Accuracy** refers to how closely a measured value agrees with the correct value.

- **Precision** refers to how closely individual measurements agree with each other.

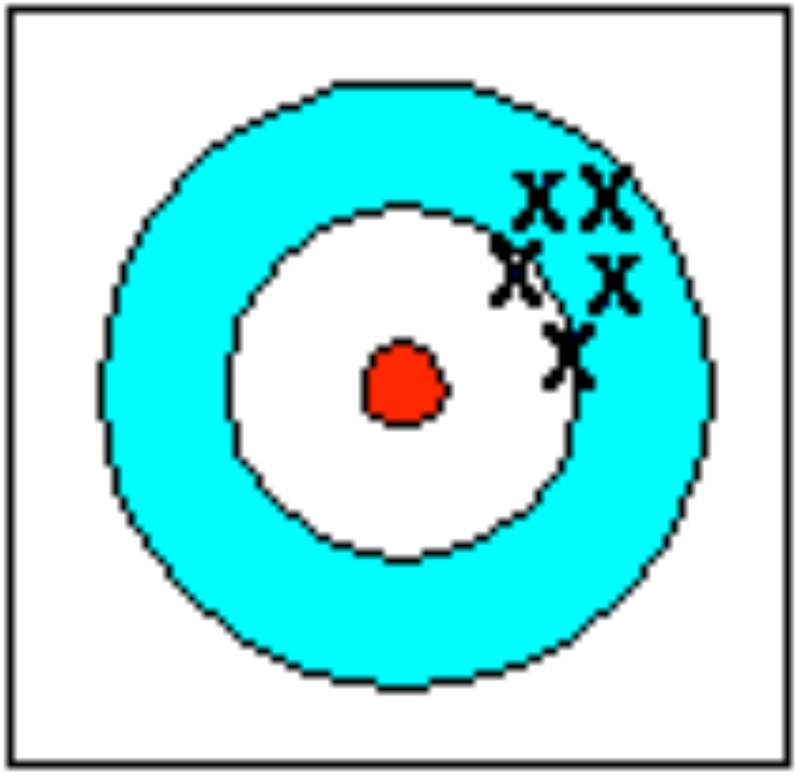
Precision vs. Accuracy



Accurate but not precise.

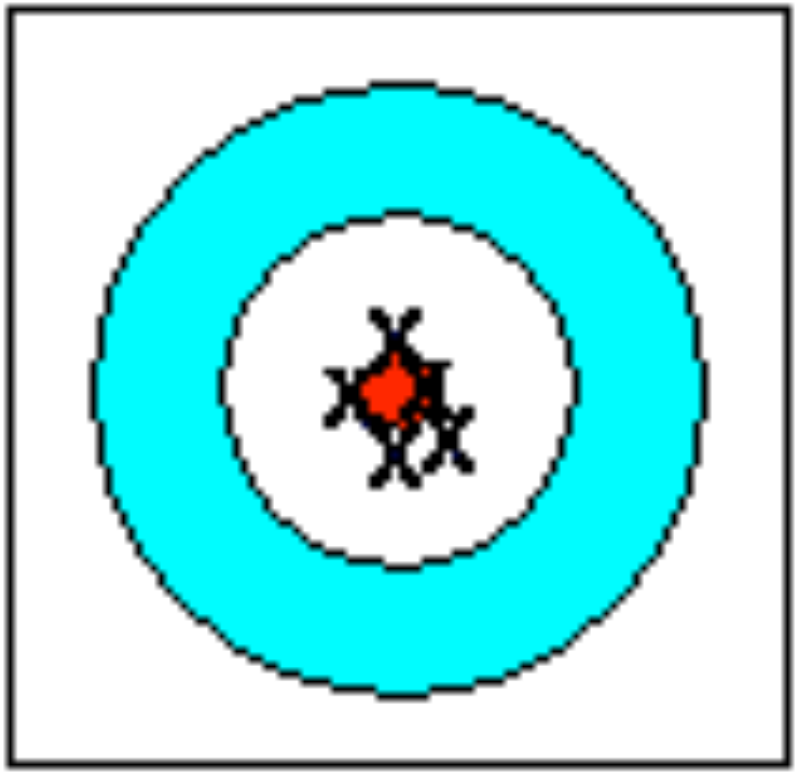
The average is close to the center but the individual values are not similar

Precision vs. Accuracy



Precise, but not accurate

Precision vs. Accuracy



Accurate and Precise