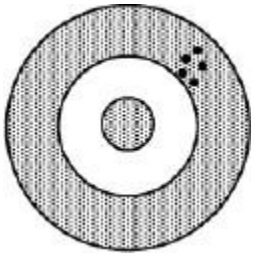
Name_____

Accuracy vs. Precision/% Error/ Scientific Notation Date_____Section_____

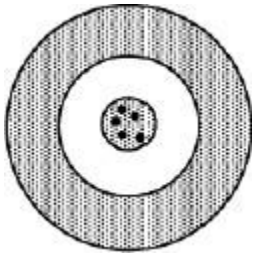
Accuracy vs. Precision:

1. Look at each target below and decide whether the darts are accurate, precise, both, or neither:



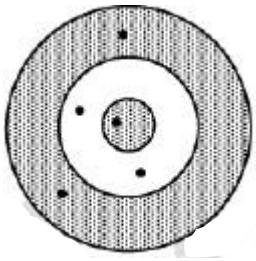
a. Accurate? Y N

Precise? Y N



b. Accurate? Y N

Precise? Y N



c. Accurate? Y N

Precise? Y N

2. Three students in each lab group measure the density of an object. The accepted value is 5.50 g/cm^3.Decide if each group's measurements are accurate, precise, both or neither:

a) 5.21 g/cm^3, 4.82 g/cm^3, and 5.33 g/cm^3

b) 5.45 g/cm^3, 5.54 g/cm^3, and 5.50 g/cm^3

c) 6.21 g/cm^3, 6.19 g/cm^3, and 6.22 g/cm^3

MORE →

Problems: For each problem, find the **percent error** AND state which observations are **qualitative** and which are **quantitative**.

3. Working in the laboratory, a student finds the density of a piece of silver, shiny aluminum to be 2.85 g/cm^3. The accepted value for the density of aluminum is 2.70 g/cm^3.

4. A student takes a yellow object with an accepted mass of 150.00 grams and masses it on his own balance. He records the mass as 146.3 grams.

5. Change to scientific notation

a. 867.4 _____ b. 0.000869 _____

c. 1000 _____ d. 1,000,000. _____

6. Change to standard notation

a. 6.32×10^5 _____ b. 5.17×10^{-3} _____

c. 5×10^0 _____ c. 1×10^{-4} _____