

## Lab Report Structure and Grading for Report 2

Abstract **(10 points)**

Method **(10 points)**

Data (1,2 5, and 6) and Discussion Section (3, 7 and 8) **(70 pts, distributed as shown below)**

Spreadsheet template **(10 points)**

Part 1

1. Graph **(10 pts)**
  - a. Scatter plot (2 pts)
  - b. Labeled (2 pts)
  - c. X axis(mint yr) and y axis(mass) correct (2 pts)
  - d. Data plotted as two separate series (2 pts)
  - e. Regression lines added for each series (2 pts)
2. Significance **(10 pts)**
  - a. Results displayed from Regression tool in tool pack (5 pts)
  - b. Results correctly interpreted (5 pts)
3. Hypothesize about mass gain or loss **(10 pts)**
4. Hypothesize about the discontinuity **(in class, a free 5 pts)**

Part 2

5. Comparison of the mean volumes (t-test) **(10 pts)**
  - a. Correct calculation of the average volumes of the pennies (5 pts)
  - b. Correct use of the t-test to compare the means (5 pts)
6. Comparison of the mean densities **(10 ps)**
  - a. Correct calculation of the average densities of the pennies (5 pts)
  - b. Correct use of the t-test to compare the means (5 pts)
7. Interpretation of the discontinuity given the data obtained in Part B **(5 pts)**
8. Speculate on the metals used pre-1982 and post-1982 based on the density data and analysis of consistency with what is known or researched (cite references) **(10 pts)**