Percent Error Worksheet Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Chemistry Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mrs. Booth Class Period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DIRECTIONS: For each of the following situations, find the percent error involved. Be careful in determining the true (accepted) versus observed (experimental) value. Assign your answer a negative value if the observed value was less than the actual and positive sign if more. Please label the observed and true values.

1. Samantha S. Sloppiness measured the volume of her soda before she drank it for her midmorning snack. She measured the value of the 12 oz bottle to be 14 oz.
2. Clyde Clumsy was directed to weigh a 500. g mass on the balance. After diligently goofing off for ten minutes, he quickly weighed the object and reported a mass of 458 g.
3. Patty Pestilence had casually recorded her grades for the quarter in her notebook. She concluded that she had 250 points out of 300 points for the grading period and would see a B on her report card. However, after referencing PowerSchool, she found she had 225 points out of 300 points and would see a C on her report card.
4. Drew D. Dingaling came to Brilliant Mrs. Booth with a problem. Drew was told to measure 50. cm of copper wire in an experiment. His ruler only measured to 45 cm, so he used this amount of wire and his experiment was a failure.
5. Henry Heavyfoot was just arrested for speeding by Officer Fox for traveling 65 mph in a 55 mph zone. Henry claimed his speedometer said 55 mph. How much was the speedometer off?
6. Wilomena Witty was assigned to determine the density of a sample of nickel metal. She finished, and reported the density of the nickel as 5.59 g/mL. However, Brilliant Mrs. Booth knew that the density of nickel was 6.44 g/mL.
7. An experiment to determine the volume of a “mole” of gas was assigned to Barry Bungleditup. He didn’t read the experiment carefully and concluded the volume was 18.7 L. Brilliant Booth knew he should have obtained 22.4 L.
8. In a similar experiment, Mary Moreorless was to determine the loss of mass when a crucible of oxygen containing chemical was heated to drive off the oxygen. After finishing the experiment, she concluded that the chemical contained 24.0 % oxygen when it actually contained 45.5 %. Why did Brilliant Booth give Mary a failing grade?