Name_____ **Percent Error Practice** **Date**_____

Period_____ **Mr. Klein**

1. In an experiment the gram formula mass of magnesium was determined to be 24.7. Compared to the accepted value 24.3, the percent error for this determination was
   (1) 0.400 % (3) 24.7 %
   (2) 1.65 % (4) 98.4 %

2. In a laboratory experiment, the melting point of compound *A* was determined to be 82.6°C. If the accepted value is 80.5°C, what is the percent error in this determination?
   (1) 2.5 % (3) 2.6 %
   (2) 2.54 % (4) 2.71 %

3. If the observed value for a measurement is 0.80 cm and the accepted value is 0.70 cm, what is the percent error?
   (1) 0.17% (3) 17.%
   (2) 0.14% (4) 14.%

4. A student determines that the gram formula mass of AgO is 128.40 grams. If the accepted value is 123.87 grams, what is the students percent error?
   (1) 0.366% (3) 3.80%
   (2) 3.66% (4) 4.53%

5. A student determined in the laboratory that one mole of $KMnO_4$ had a mass of 171.54 grams. The mass of one mole of $KMnO_4$ in an accepted chemistry reference is 158.04 grams. What is the percent error of the mass of one mole of $KMnO_4$ as determined by the student?
   (1) 0.787% (3) 8.54%
   (2) 7.87% (4) 13.5%

6. Using atomic masses given in the Reference Tables for Chemistry, the molecular mass for $O_2(g)$ is 32.0. By experiment a student measured the mass of $O_2(g)$ to be 28.0. What is the percent error in the student's result?
   (1) 1.25% (3) 12.5%
   (2) 1.43% (4) 14.3%

7. The accepted value for the molar volume of a gas is 22.4 liters. In a laboratory experiment, a student determines the value to be 24.8 liters. What is the percent error of the student's measurement?
   (1) 0.120% (3) 10.7%
   (2) 0.107% (4) 12.0%

8. A student in a laboratory determined the boiling point of a substance to be 71.8°C. The accepted value for the boiling point of this substance is 70.2°C. What is the percent error of the student's measurement?
   (1) 1.60% (3) 2.23%
   (2) 2.28% (4) 160.%

9. A student determined the heat of fusion of water to be 300 joules per gram. If the accepted value is 334 joules per gram, what is the student's percent error?
   (1) 8.0 % (3) 21.0 %
   (2) 10.2 % (4) 90.0 %

10. A student determined that the percent of H_2O in a hydrate was 39.0%. The percent of H_2O in this hydrate is 36.0% according to an accepted chemistry reference. What is the student's percent of error?
    (1) 9.1% (3) 3.0%
    (2) 8.3% (4) 11%