Name _____ Class _____ Date _____

Significant Figures & Scientific Notation

1. State the number of significant figures in each measurement.

   _____ a. 734 grams

   _____ b. 82.400 meters

   _____ c. 92 000°C

   _____ d. 0.003 second

   _____ e. 607 liters

   _____ f. 1×10^{-4} hertz

2. Round the number at left to the number of significant figures stated in each column.

Number	Four significant figures	Three significant figures	Two significant figures	One significant figure
84.631				
0.945 00				
7.953 10				
2 058 268				

3. Perform the following operations. Round the answers to the appropriate number of significant figures. Label.

   a. 8.2 cm × 6.08 cm × 15.0 cm

   b. 34.8 meter / 3.048 seconds

   c. 23.4°C – 8.4°C

   d. 65.48 g + 3.0 g + 0.882 g + 26.46 g

4. Convert the following numbers from decimal to scientific notation. The answer must have the same number of significant figures and label as the original number.

   _____ a. 150 000 000 km (average distance between Earth and the sun)

   _____ b. 0.000 198 cm (diameter of a blood platelet)

   _____ c. 7400. grams (mass of a bowling ball)

   _____ d. 6 km/hour (fast walking speed)

5. Convert the following numbers from scientific notation to decimal notation.

   _____ a. 1.3×10^{4} km (diameter of Earth)

   _____ b. 3.85×10^{6} square miles (area of the U.S.)

   _____ c. 8.0×10^{-3} gram (mass of a small spider)