

Name \_\_\_\_\_

Period \_\_\_\_\_

**Chemistry Practice Test  
Introductory Unit**

**Form P**

**Part I:** Numerical Practice. You may use a calculator for this test.

1. Perform the indicated operations.

A.  $10^1 \times 10^2$  = \_\_\_\_\_ D.  $10^3/10^4$  = \_\_\_\_\_

B.  $10^{-5} \times 10^6$  = \_\_\_\_\_ E.  $10^{-7} \times 10^8$  = \_\_\_\_\_

C.  $10^9/10^{10}$  = \_\_\_\_\_

2. How many significant figures are in each of the following measurements:

A. \_\_\_\_ 355.5 kcal

D. \_\_\_\_  $2.50 \times 10^{-3}$  cm

B. \_\_\_\_ 10 g

E. \_\_\_\_ 0.001 m

C. \_\_\_\_ 0.310 kg

3. Convert the following numbers to scientific notation:

A. 0.000 001 041 \_\_\_\_\_

B. 6 022 000 000 \_\_\_\_\_

C. 6 022 000 \_\_\_\_\_

D. 880 000 000 000 \_\_\_\_\_

E. 0.000 309 \_\_\_\_\_

4. Perform the following on a calculator, remember significant figures.

A.  $(1.49 \times 10^{-3})(9.56 \times 10^{10})$  = \_\_\_\_\_

B.  $2.300 \times 10^4 + 5.19 \times 10^4$  = \_\_\_\_\_

C.  $5.11 \times 10^4 - 2.58 \times 10^4$  = \_\_\_\_\_

D.  $7.35 \times 10^7 / 3.9 \times 10^3$  = \_\_\_\_\_

E.  $8.40 \times 10^4 / 4.2 \times 10^5$  = \_\_\_\_\_

5. Perform the following metric conversions.(ignore sig figs)

A. 0.007m = ?mm A. \_\_\_\_\_

B. 8000 cL = ?L B. \_\_\_\_\_

C. 100 cm = ?mm C. \_\_\_\_\_

D. 0.005 km = ?cm D. \_\_\_\_\_

E. 409 L = ?cL E. \_\_\_\_\_

**Form P**

**Part II: Problem Solving.** Show all your work and solve the following problems using the rules of sig figs. If your answer has no unit it is wrong.

1. A rectangular block is measured and found to be 10.50 cm long, 9.90 cm wide, and 3.30 cm thick. If it has a mass of 25.00 g what is its density?

1. \_\_\_\_\_

2. A container of a thick oily liquid has a mass of 68.31 g when empty and 93.34 g when filled with 10.00 mL of the substance. What is the density of the liquid?

2. \_\_\_\_\_

3. The density of liquid gold is 19.32 g/mL. If you were to fill a 2.000 liter soda bottle with gold what would the mass of the liquid be?

3. \_\_\_\_\_

4. A sheet of plywood measures 266 cm by 133 cm. If it takes a whole liter (1000.0 cm<sup>3</sup>) of paint to cover one side what is the thickness of the paint layer?

4. \_\_\_\_\_

5. A large dog can eat food at the rate of 2.75 kg per day. What is this rate in g/hour?

5. \_\_\_\_\_