Name _____   Period _____

Honors 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. ____ 2.50×10^{-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. _____

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 it's 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^3) 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. _____