Quiz 1A

1. Identify each of the following activities in the scientific method as an observation (O), a hypothesis (H), an experiment (E), or a theory (T) (2 points).
	1. Formulate a possible explanation for your experimental results. \_\_H\_\_
	2. Collect data. \_\_O\_\_
2. Evaluate the following calculations. Be sure to express your answers numerically using the appropriate number of significant figures (4 points).
	1. $\frac{12×5.47}{8.1}=8.103703704≈8.1$
	2. $2.8+98.453=101.253≈101.3$
3. Write the equality and conversion factors for each of the following (6 points):
	1. One gallon is 4 quarts.

1 gal ≡ 4 qt

$$\frac{1gal}{4 qt};\frac{4 qt}{1 gal}$$

* 1. At the store, oranges are $1.29 per lb.

$1.29 = 1 lb

$$\frac{\$1.29}{1 lb};\frac{1 lb}{\$1.29}$$

1. What is the estimated digit in each of the following measurements (2 points)?
	1. 34.56 g \_\_\_6\_\_\_
	2. 0.4563 L \_\_\_3\_\_\_
2. Round the following to 3 significant figures (2 points):
	1. 0.45378 \_\_0.454\_\_\_\_
	2. 5.5 \_\_\_5.50\_\_\_
3. Fill in the blank (2 points):
	1. Graduated cylinders are usually read to the \_\_\_0.1\_\_\_\_\_\_\_ milliliters.
	2. On an electronic balance be sure it is \_”zeroed” or “tared”\_\_\_\_\_\_\_\_\_\_\_\_\_ before anything is placed on the pan.
4. Name two strategies that you will use to be successful in this course (2 points).

Quiz 1B

1. Fill in the blank (2 points):
	1. Never put \_\_reagents or chemicals\_\_\_\_\_\_\_\_\_\_ directly on the pan.
	2. Keep the \_\_\_\_\_thermometer\_\_\_\_\_\_\_\_\_\_ away from the container walls.
2. What is the estimated digit in each of the following measurements (2 points)?
	1. 15,027 s \_\_\_7\_\_\_
	2. 0.45 mm \_\_\_5\_\_\_
3. Identify each of the following activities in the scientific method as an observation (O), a hypothesis (H), an experiment (E), or a theory (T) (2 points).
	1. Design an experimental plan that will give new information about \_\_E\_\_

a problem.

* 1. State a generalized summary of your experimental results. \_\_T\_\_
1. Round the following to 3 significant figures (2 points):
	1. 0.61 \_\_0.610\_\_\_\_
	2. 453.2 \_\_\_453\_\_\_
2. Evaluate the following calculations. Be sure to express your answers numerically using the appropriate number of significant figures (4 points).
	1. $12.34-8.768=3.572 ≈3.57$
	2. $\frac{22}{9.1×4.556}=0.530637054≈0.53$
3. Write the equality and conversion factors for each of the following (6 points):
	1. There are 7 days in 1 week.

7 days ≡ 1 week

$$\frac{7 days}{1 week};\frac{1 week}{7 days}$$

* 1. At the store, apples are $2.49 per 2 lbs.

$2.49 = 2 lbs

$$\frac{\$2.49}{2 lbs};\frac{2 lbs}{\$2.49}$$

1. Name two strategies that you will use to be successful in this course (2 points).