Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_

**Determining and Calculating Significant Figures**

1. Indicate how many significant figures there are in each of the following measured values.
2. 246.32 \_\_\_\_\_ b) 107.854 \_\_\_\_\_ c) 100.3 \_\_\_\_ d) 0.678 \_\_\_\_\_

e) 1.008 \_\_\_\_\_ f) 0.00340 \_\_\_\_\_\_ g) 14.600 \_\_\_\_\_ h) 0.0001 \_\_\_\_\_\_

i) 700000 \_\_\_\_\_ j) 350.670 \_\_\_\_\_\_ k) 1.0000 \_\_\_\_\_ l) 320001 \_\_\_\_\_

Write the rule to follow for determining the amount of significant figures in your answer when adding and subtracting. \_\_\_\_\_\_\_Your answer should contain as many numbers after the decimal place as the least accurate of the numbers you are adding or subtracting. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Calculate the answers to the appropriate number of significant figures.
2. 32.567 b. 246.24 c. 658.0 d) 3475.32

135.0 238.278 23.5478 28.98

+ 1.4567 + 98.3\_\_ + 1345.29\_\_ - 1.6\_\_

Write the rule to follow for determining the amount of significant figures in your answer when multiplying and dividing. \_\_\_Your product should contain as many significant figures as the number that your multiplying (or dividing) that has the least amount of significant figures.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Calculate the answers to the appropriate number of significant figures.
2. 23.7 x 3.8 = \_\_\_\_\_\_\_ f) 1.678 / 0.42 = \_\_\_\_\_\_
3. 45.76 x 0.25 = \_\_\_\_\_\_\_ g) 28.367 / 3.74 = \_\_\_\_\_\_\_
4. 81.04 x 0.010 = \_\_\_\_\_\_ h) 4278 / 1.006 = \_\_\_\_\_
5. 6.47 x 64.5 = \_\_\_\_\_\_\_ i) (6.8 + 4.7) x 17.44 = \_\_\_\_\_\_\_
6. 43.678 x 64.1 = \_\_\_\_\_\_ j) (6.8 + 4.7) x 17.44 = \_\_\_\_\_\_\_

Multi-Step Problems:

k) (320. – 22.7) x 3.8 = \_\_\_\_\_

1. (14.86 + 13.7) x (65.346 – 4.10) = \_\_\_\_\_\_\_\_\_

 (43.888 – 32.888)