**Significant Figures Quiz**

How many significant figures does each of the following measurements have? (1 pt)

1. 4055 grams \_\_\_\_\_\_\_\_\_\_
2. 3.04 x 104 cm \_\_\_\_\_\_\_\_\_\_
3. 0.020 kg \_\_\_\_\_\_\_\_\_\_
4. 340 liters \_\_\_\_\_\_\_\_\_\_
5. 0.00405 Pascals \_\_\_\_\_\_\_\_\_\_
6. 45900 kilometers \_\_\_\_\_\_\_\_\_\_
7. 930. Moles \_\_\_\_\_\_\_\_\_\_
8. 982048 kilograms \_\_\_\_\_\_\_\_\_\_

Do each of the following calculations to the proper number of significant figures:

1. I just made a cake that weighs 35.0 kg. If a giant rat comes out at night and eats 0.47 kg of the cake, how much cake is left over? (4 pt)
2. With a little creativity, it’s possible to launch a squirrel into low earth orbit using off the shelf parts. If your squirrel travels 4.0 x 105 meters in 110 seconds, what is its velocity in meters per second. (4 pt)
3. Why would it generally be considered better to take a pill that weighs 500.0 grams rather than one that weighs 500 grams? Explain using your knowledge of sig figs. (4 pt)
4. I’ve measured that my dog lives in a crate that’s 134 cm on one side, 250 cm on another side, and 84.0 cm top to bottom. What is the volume of the crate in which this dog lives? (4 pt)
5. Why do we consider “counting numbers” (for example “45 apples”) to have infinite significant figures? (3 pt)