**AMDM**

**Unit 3 Worksheet**

**Observational Study or Experiment?**

1. Which of the following is an observational study and which is an experiment?
2. The AMDM instructor announces a study session to be held the night before a test. The instructor lists the students who attended the session and compares their scores to the remaining AMDM students’ scores.

**Observational Study**

1. To determine whether a review session will improve his students’ test scores, a AMDM instructor divides his class into two groups. He then requires one group to attend a study session and compares the test results of each group.

**Experiment**

**Population and Sample, Parameter and Statistic**

1. You are interested in the proportion of AMDM students that will end up with an A this semester. Identify the:

(a) population: **all AMDM students this semester**

(b) individual: **a Stat 113 student this semester**

(c) variable: **whether or not a student will end up with an A**

1. The mean income of all subscribers to a particular magazine is **$26000**. We draw a random sample of 100 subscribers and find that their mean income is **$27300**. Identify the

(a) population: **all subscribers to the particular magazine**

(b) sample: **100 randomly selected subscribers**

(c) parameter: **$26000**

(d) statistic: **$27300**

1. The average GPA for all female volleyball players in a particular college is **2.8**, and their mean height is **182cm**. Identify the parameter or statistic if there is any. **2.8 and 182cm are both parameters.**
2. Of the U.S. adult population, 36% has an allergy. A sample of 1200 randomly selected adults resulted in 33.2% reporting an allergy.

a. Describe the population.

b. What is the sample?

c. Identify the statistic and give its value.

d. Identify the parameter and give its value.

1. Determine whether the following represents a **population** or a **sample**.

a. A school lunch survey that asks every fifth student that enters the lunch room.

b. A list of the test scores of all the students in a school.

c. The salaries of employees at Wexler’s Office Supplies.

d. A survey of 728 random people found that 72% prefer comedies when going to the movies.