Project 1.1.6 Student Response Sheet

Experiment One:

A researcher wanted to test the effect of caffeine on sleep. Fifty students volunteered to participate in the study and signed up for one of two nights. Thirty-three students participated on Tuesday night. They each were given two cups of regular coffee to drink one hour before going to sleep. Seventeen students participated on Wednesday night. They each were given two cups of decaffeinated coffee to drink one hour before going to sleep. Each student was monitored with an EEG (a test that looks at brain function) to record exactly when they fell asleep. Students in the caffeine group took significantly longer to fall asleep. The researcher concluded that caffeine interferes with the ability to fall asleep.

1. What was the independent variable for Experiment One?
2. What was the dependent variable for Experiment One?
3. What components of the experiment were set up properly?
4. How could Experiment One be improved?

**Experiment Two:**

A researcher wanted to determine if a new anti-anxiety drug decreased anxiety levels. Three hundred patients were given the new drug and three hundred patients were given a placebo (also known as a “sugar pill” that does not contain any medicine). All of the patients were told they were receiving the new drug and were monitored for six months. At the end of the six months, all of the patient information was analyzed and the researcher concluded that because the patients given the placebo indicated the same reduction in anxiety as the patients given the new drug, the new drug was ineffective in decreasing anxiety levels.

1. What was the independent variable for Experiment Two?
2. What was the dependent variable for Experiment Two?
3. What components of the experiment were set up properly?
4. How could Experiment Two be improved?
5. Describe how a variable was NOT controlled in one of the two experiments. How might this have impacted the results?