Open Book II Example

1. Informal observation led a counselor to believe that when clients arrive late for an appointment, males arrive later them females. She decided to conduct a test of this to see if there were reliable sex differences in later arrivals. She records for each client that was late, the number of minutes they were late to their appointment.

A.	Identify the independent variable
B,	Identify the dependent variable
C.	Is this a between / within subjects design and is it experimental or correlational
D.	State the null and alternative hypothesis, both symbolically and in words
E.	Calculate the value of the test statistic and the critical value
F.	What is the statistical decision and what do you conclude?

Males	Females
12	10
10	7
14	7
9	9
11	6
10	9

Identifying Main and Interaction Effects

A researcher was interested in how quality of rest (sleeping) might be influenced by the difficulty of a workout and the time that that workout occurred during the previous day. She randomly assigned a group of volunteer students to come in for an exercise session either in the early morning before classes (at 7:00 AM) or in the evening (at 7:00 PM). The volunteer students were also either randomly assigned to participate in a stretching and track walking class (the light exercise condition) or to an aerobics class (heavy exercise condition). The following morning all participants completed a questionnaire including an item asking them to rate on a 10 point scale (10 better sleep) the quality of their sleep that night (the night after the exercise session). She believed that rated quality of sleep would be better when the heavy exercise was done, especially if it were done in the morning.

1. Describe the IVs and DV for the study above, within/between, corr/exp. Describe the

2. For each graph below, tell what effects are likely to be significant and if the graph is consistent with the researchers expected outcome.