Statistical Reasoning Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz Review 6.1 Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Day: \_\_\_\_\_\_

1. The drug company Pfizer wants to test whether the drug “Lipitor” causes a decrease in cholesterol for adults with high cholesterol. They recruit 894 adults with high cholesterol and require each of them to take one pill a day for 6 months. Half of them (447) are randomly selected to take Lipitor while the other half are randomly selected to take an identical salt water pill with no medicine. At the end of six months, they measure the change in cholesterol.

Identify the:

1. Subjects:
2. Explanatory Variable:
3. Response Variable:
4. Treatments:
5. Placebo:
6. Control Group
7. Treatment Group:
8. Draw a diagram to show an outline design for this experiment.
9. In marketing children’s products, it is extremely important to produce television commercials that hold the attention of the children who view them. A psychology hired by a marketing research firm wants to determine whether the differences in attention span exist among advertisements for different types of products. Fifteen children under age 10 are randomly asked to watch on e 60-second commercial for one of three types of products and their attention spans are measured in seconds.

Identify the:

1. Population:
2. Subjects:
3. Explanatory Variable:
4. Response Variable:
5. Treatments:
6. Draw a diagram to show an outline design for this experiment.
7. A food scientist has developed a new type of corn that is to yield greater amounts of corn for harvest. Some factors involved in growing corn are the amount of water (only rain or watered each morning); the amount of sun (full or partial); and if pesticide was used (used or not). You have 120 plants to put into a field for the experiment. Draw an appropriate experimental design.
8. Is diet or exercise effective in combating insomnia? Some believe that cutting out desserts can help alleviate the problem, while others recommend exercise. Forty volunteers suffering from insomnia agreed to participate in a month-long experiment. Half were randomly assigned to a special no-dessert diet; the other continued desserts as usual. Half of the people in each of these groups (dessert, no-dessert) were then randomly assigned to an exercise program while the others did not exercise. Those who at no desserts and engaged in exercise showed the most improvement.

Identify the:

1. Subjects
2. Explanatory Variable
3. Response Variable
4. Treatments
5. Draw a diagram to show an outline design for this experiment