Variables and Groups

Research Strategies and Statistics

A.P. Psychology

Name _____

Date _____

Period _____

Part 1: Experimental Method Variables & Groups

Name the Independent Variable (IV), the Dependent Variable (DV), and the Control Group (CG), and the Experimental Group (EG) for each research statement. Where necessary, create a specific Control Condition.

1. A researcher is interested in how the activity level of 4-year-olds is affected by viewing a 30-minute video of Teenage Mutant Ninja Turtles.
    a. IV-
    b. DV-
    c. EG-
    d. CG-

2. A therapist wants to test a new drug designed to increase the ability of teenagers with ADHD to take accurate notes in class.
    a. IV-
    b. DV-
    c. EG-
    d. CG-

3. A biopsychologist wants to know whether exposure to testosterone in adult females increases aggressive behavior.
    a. IV-
    b. DV-
    c. EG-
    d. CG-

4. An industrial psychologist believes that cooling the room temperature may have an impact on productivity of workers on the assembly line.
    a. IV-
    b. DV-
    c. EG-
    d. CG-

Part 2: Statistical Sample Size

1. Imagine that you are a golfer of above-average ability and that you have the opportunity to play the greatest golfer in the world (say Tiger Woods or Nick Price). If you want to maximize your slim chance of winning, how much golf would you elect to play, given the choices of 1, 18, 36, or 72 holes?

   _____

2. A certain town is served by two hospitals. In the larger hospital about 45 babies are born each day, and in the smaller hospital about 15 babies are born each day. Although the overall proportion of boys is about 50 percent, the actual proportion at either hospital may be greater or less than 50 percent on any day. At the end of a year, which hospital will have the greater number of days on which more than 60 percent of the babies born were boys?

   (a) the larger hospital

   (b) the smaller hospital

   (c) neither-the number of days will be about the same (within 5 percent of each other)

3. Imagine an urn filled with white and black balls. You know that two-thirds of the balls are one color and one-third are the other, but you don't know which color predominates. One blindfolded person plunges a hand into the urn and comes up with 3 black balls and 1 white ball. Another uses both hands and comes up with 14 black balls and ten white balls. Which sample provides the more convincing evidence that the urn contains more black balls than white balls?

   (a) the first, or 3: 1 sample

   (b) the second, or 14:10 sample

   (c) they are equally convincing