Question 1. Does listening to a morality tale change how children act? Lee et al. (2014) were interested in measuring the effectiveness of classic moral children’s stories in promoting honesty. One way to do this is to randomly assign children to hear either a story about the importance of telling the truth, such as “George Washington and the Cherry Tree” (“I cannot tell a lie”) or another children’s story, such as “The Tortoise and the Hare,” which has a moral but not about truthtelling. Children aged 3 to 7 then performed an apparently unrelated task of trying to identifying a toy based on the sound it makes (e.g., a toy duck quacking) while their back was turned to the experimenter. There were several trials of toy identification, including several fairly hard toys to identify. The critical part of this task occurred when the experimenter would periodically announce that she had leave the room to retrieve more toys to continue the “game,” Before leaving, the next test toy is left on the table, the experimenter requests that the child not peek at the toy while she is gone. After the experimenter has left the room, another researcher rates how many times the child peeks at the toy as a measure of how dishonest the child is. (34 pts total)

1. What are the two constructs being studied in this experiment? (4 pts)
2. From which construct is the independent variable derived? How is it operationally defined? (4 pts)
3. From which construct is the dependent variable derived? How is it operationally measured? (4 pts)

Question 1 continued.

1. The use of the “The Tortoise and the Hare” story is important for the design of the experiment. Why would the design have been weaker if the children assigned to this condition had simply sat quietly during this part of the experiment? What is this kind of condition called in an experiment? (4 pts)
2. What concerns might you have about the researcher who was counting the number of times each child peeked at the toy? What is the best way to ensure this doesn’t affect the reliability of the results? (4 pts)
3. Give two ethical issues that would have to be considered and addressed in designing this study before it could be approved for data collection to start. (4 pts)
4. Here are some hypothetical data that might have come from this study. The scores are based on the number of times each child peeked at the toy.

|  |  |  |  |
| --- | --- | --- | --- |
| Condition | Mean | SD | SE |
| “George Washington” | 2.0 | 1.49 | 0.47 |
| “Tortoise and the Hare” | 4.8 | 1.87 | 0.59 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Levene's Test for Equality of Variances | |  | | | | | | |
|  | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
|  |  |  |  |  |  |  |  | Lower | Upper |
| Number of peeks | .315 | .582 | 3.698 | 18 | 0.002 | 2.800 | 0.757 | |  | | --- | | 1.209 | | 4.391 |

What type of analysis did the authors use to evaluate the effect of the IV on the DV (be as specific as you can)? Was it reliable? How do you know? (4 pts)

1. Write out a results statement describing the data. Include both descriptive and inferential statistics in standard APA format. (6 pts)

Question 2. Definitions.

Fill in the blanks with the appropriate terms (3 points each, 30 total):

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A university-wide committee that reviews proposed research to safeguard the safety and rights of human participants.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ The technique of assigning participants to treatments so that each participant has an equal chance of being assigned to each treatment condition.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ In a double-blind versus a single-blind design, who is the additional person in the experiment who doesn’t know the experimental condition?.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A technique for controlling subject variables (e.g., age) by systematically distributing participants based on that variable.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A control procedure used to avoid confounding; keeping all aspects of the treatment conditions identical except for the independent variable that is being manipulated.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A threat to internal validity that only occurs for within-subject experimental designs.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ This is when the effect of one independent variable changes across the levels of another independent variable. It can only be detected in factorial designs.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ The hypothesis that there is no relationship between the variables, that is, the different levels of the independent variable do not affect the scores on the dependent variable.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ An extraneous variable that varies with the independent variable and creates an internal validity threat.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ The unethical practice of falsifying or fabricating data; plagiarism is also a form of this unethical behavior.

Question 3. In Hadar & Sood (2014), researchers examined the idea of “less is more” with regards to people’s purchasing behavior. They hypothesize that people who feel they know a lot about a particular product are less likely to want to purchase when there are a high number of choice options. In contrast, those who feel they are relatively less knowledgeable prefer a higher number of options. One way to study this is by first priming participants to believe they are either more or less knowledgeable about a particular product such as coffee. Hadar & Sood (2014) did this by telling participants that their responses were either being compared with coffee experts (professional coffee tasters) in one condition, and compared to high school students in the other condition. Participants are then presented with either 5 or 25 different types of coffee and asked how likely, on a 1-7 scale, they would be to purchase one type of coffee if they won a $5 raffle at the end of the study. (36 points total)

1. What type of experimental design is this study? (2 pts)
2. What are the independent variable(s)? What are their levels? You may use a diagram to answer this question. (6 pts)
3. What is the dependent variable and what construct is it measuring? (4 pts)
4. Suppose the data for this study were to be collected in a shopping mall at a table set up near the stores. Two possible locations for the table are available, one outside a shoe store and one directly in front of a high-end and aromatic coffee roaster. What problem might this pose for running the study and how would you solve it? (4 pts)
5. Suppose you discovered right before data collection was to start that the shopping mall is going to full of high school students and professional coffee tasters (from a local conference) during the times data collection is planned. What could you do to manage this without changing the independent variables and what consequence would it have for reporting the data? (4 pts)
6. You might want to run a study like this as a within-subject design for increased efficiency, but it would be hard to adapt the current design. Which variable could you try to run within-subjects and what type of problem would likely occur? (4 pts)
7. Imagine that the results obtained from this study were similar to that of the Hadar and Sood (2014) study: participants primed to feel highly knowledgeable indicated a higher likelihood of purchasing when they were in the small choice set condition compared to the large choice set condition. This pattern was reversed for the low knowledge groups. Describe a hypothetical set of results in terms of the three hypotheses that are embedded in this kind of experimental design. (8 pts)
8. Using the template below, draw a graph that illustrates these results. (4 pts)

