

II. Practice with hypothesis: Mark the letter of the correct answer on the left.

1. Which of the following is a null hypothesis?
 - A. There is a statistically significant difference in loan rejection rates of white males, white females, African-American males, and African-American females.
 - B. Loan approvals are dependent upon applicants' gender.
 - C. There is no relationship between applicants' race and gender and the rate at which their loan applications are approved.
 - D. Bank lending practices are discriminatory in terms of race and gender.
 - E. All of the above.

2. What is an example of an alternate one-tailed (or directional) hypothesis?
 - A. There is a statistically significant relationship between college students' opportunity cost of time and their grade point average.
 - B. Students who have higher opportunity cost of time have lower grade point average than those who have a lower opportunity cost of time.
 - C. The opportunity cost of students' time is related to their grades.
 - D. There is no statistically significant difference in the opportunity cost of time of student with different grade point of average.
 - E. None of the above.

3. Which of the following is a hypothesis of an interaction effect of two independent variables?
 - A. Married males have the highest rates of obesity, followed proportionately by single males, married females, and single females.
 - B. Males have higher rates of obesity than do females.
 - C. Married males have the highest rates of obesity, followed successively by married females, single females, and single males.
 - D. Single people have higher rates of obesity than married people.
 - E. None of the above.

4. Which of these is a hypothesis with a curvilinear effect of one variable on another?
 - A. There is a positive relationship between consumers' age and their willingness to shop online up until age 40; after that age, there is no relationship between consumers' age and willingness to shop online.
 - B. As the price of gasoline decreases, the quantity of gasoline demanded increases proportionately (that is, for a one unit decrease in one, there is a one unit increase in the other).
 - C. Individuals become more risk averse with each successive year of age.
 - D. There is a positive relationship between children's time horizon and their likelihood of saving any money from their allowances.
 - E. None of the above.

5. What is true about this hypothesis: controlling for their attitudes toward debt, individuals who are more knowledgeable about credit have lower levels of debt.
 - A. This is a hypothesis of an interaction effect.
 - B. Respondents' attitudes toward debt are the dependent variable.
 - C. The control variable (or covariate) is level of debt.
 - D. The independent variable is knowledge about credit.
 - E. All of the above.

III. Process of arriving at a research question and hypothesis

What is wrong with *all* of the following purpose statements?

1. The purpose of my study is to analyze retirement in the U.S.
2. I will study single-parent families in the U.S.
3. My purpose in doing this research is to investigate consumers' knowledge about nutrition.
4. The purpose of this research is to study nutrition and cancer.
5. The purpose of this research is to study families' finances.
6. I will study functional food.
7. The purpose of this research is to study parents' marital satisfaction and children's wellbeing.
8. This research will focus on green design.
9. The purpose of this study is to investigate childhood obesity.

Select one of those purpose statements and improve it to suit the quantitative research paradigm.

- a). First, write a more specific purpose statement
- b). Next, write a research question with at least one independent and one dependent variable.
- c). Then, write a null hypothesis for your new research question.
- d). Finally, write an alternative directional (one-tailed, preferred) or non-directional hypothesis for your new research question. [At this point, this does not have to be "justified;" just be sure to state a relationship and/or a direction of the relationship that seem plausible.]