

Chapter 5 Selected Homework Answers

1. Answers describing the experiment will vary depending on the experiment the student develops. The research hypothesis is that there *is* a relationship between the independent and dependent variables in your study. The null hypothesis is that there is *no* relationship between the independent and dependent variables in your study.

3. The research hypothesis is that there *is* a relationship between the amount of fat in one's diet and the development of cancer. The null hypothesis is that there is *no* relationship between the amount of fat in one's diet and the development of cancer.

5. The researcher failed to find a relationship between the independent and dependent variables when one actually existed.

7. Develop a research hypothesis; develop a null hypothesis; develop an alternative hypothesis that relates to the research hypothesis; gather data; determine if the relationship found is a non-chance one. If so, the null hypothesis will be rejected and the alternative hypothesis will be thought to reflect the truth.

9. Leisure-time activity patterns.

11. Age: There is *no* relationship between age and leisure-time physical activity patterns.
Gender: There is *no* relationship between gender and leisure-time physical activity patterns.

13. D

15. B

17. There is *no* difference in treadmill time to exhaustion for those training with exercise regimen A or B.

Stated another way, there is *no* relationship between training method (A or B) and treadmill time to exhaustion.

19. Treadmill time to exhaustion.

21. The researchers make a Type II error if they conclude there is *no* difference between training regimens (A and B) when, in fact, there *is*. They failed to find a difference (or relationship) that really exists.