

Homework Solutions
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Exercise 29

- (a) It an experimental study. The researchers manipulated the levels of estrogen that was administered.
- (b) The response variable is whether the subject died from heart disease.
- (c) The explanatory variable is whether the subject was given the estrogen therapy. There are two levels. Either the subject received estrogen or she did not.
- (d) Placebo.
- (e) H_0 : There is no difference in the death rates due to heart attacks between women who receive estrogen therapy and women who do not receive estrogen therapy.
 H_1 : There is a difference in the death rates due to heart attacks between women who receive estrogen therapy and women who do not receive estrogen therapy.
- (f) The p -value was less than 0.05. We know that because the results were statistically significant and the significance level was 0.05.
- (g) Yes, a Type I error *could* have been made because the researchers rejected the null hypothesis.