

Review Exercise 3



Chapter 3 .5 point extra credit

1. Which of the following correlations is the weakest: $r = +.25$, $r = +.05$, or $r = -.15$?
2. What does the null hypothesis assume when testing the statistical significance of an obtained sample correlation?
3. What is meant by *extrapolation*?
4. What is meant by *restricted range*?

Use the following description to answer question 5.

A marketing researcher interested in the relationship between item location and item price measured the distance between a randomly selected item and the cash register and the price for the item. The data collected are given below.

Distance (in feet): 12 14 11 25 23

Item Price: \$4.00 \$3.00 \$4.60 \$2.20 \$2.70

5.
 - A. What question is the researcher trying to answer?
 - B. Using Excel, obtain the scatterdiagram for the data above.
 - C. Interpret the scatterdiagram obtained in part B by describing the strength and direction (positive or negative) of the relationship between Distance and Item Price.
 - D. What is the null hypothesis for this problem?
 - E. Use Excel to find the value of r .
 - F. Is the value of r statistically significant at $\alpha = .05$ (or $p = .05$)?
 - G. Provide an interpretation for your answer to part D.
 - H. What is the value of the coefficient of determination (or r^2)?
 - I. Provide an interpretation to your answer in part F.