

Project 2

Student Name: _____
Student ID#: _____

Each part is worth 25 points. Give a complete solution to receive the full credit!

1. Do creative people make better salespeople? Ten sales staff in a large company were given a creativity test (scores 0 to 20, with higher scores indicating greater creativity) and were evaluated regarding sales growth performance (a score of 100 indicates an average performance, and larger scores indicate better performance). The creativity scores and sales growth performance scores are given below.

Creativity score	Sales growth
9	93
7	89
8	95
13	101
10	102
10	96
9	95
18	111
10	103
14	107

- (a) Use your favorite spreadsheet program to find the correlation and the least square regression equation. Make a scatter plot that includes this line and the equation.
 - (b) If someone scores 15 in creativity test, what is the estimation of his sales growth (use the equation from the previous question to answer)?
 - (c) What percent of the variation in Sales growth can be explained by the straight-line relationship with Creativity? (Hint: Find the R-square)
2. File Project2-question2.csv contains IQ test scores of 31 seventh-grade girls in a Midwest school district and 47 seventh-grade boys from the same district.
 - (a) Make stem-plots of both sets of data.. Because the distributions are reasonably symmetric with no extreme outliers, the t procedures will work well.
 - (b) Treat these data as SRSs form all seventh-grade students in the district. Is there good evidence that girls and boys differ in their mean IQ scores? State hypothesis, carry out a two-sample t test, and report your conclusions.