

Regression Practice

1. Below is data concerning employee performance scores and their level of anxiety on the job.

anxiety	performance
18	7
19	8
11	6
16	6
15	5
16	7
12	4
6	3
9	4
9	5

- Compute the correlation between anxiety and performance. Report whether that correlation is significant at $\alpha = .05$, and report in APA format.
- Calculate the regression equation for this data.
- What performance score would you predict for someone with an anxiety score of 20?
- What proportion of variation in performance can be explained by anxiety?
- What is the standard error of estimate for this data?
- Calculate the F test to determine if a significant proportion of variation in performance can be explained by anxiety. Use $\alpha = .05$.
- Calculate the T-test to determine if the regression coefficient differs significantly from zero. use $\alpha = .05$.

2. Below is data concerning marriage satisfaction scores (on a scale of 1-10) and the perceived level of household responsibilities (on a scale of 0-100) for females.

responsibility	satisfaction
50	8
65	8
80	6
85	6
90	4
85	7

- Compute the correlation between responsibility and satisfaction. Report whether that correlation is significant at $\alpha = .05$, and report in APA format.
- Calculate the regression equation for this data.

- c. What satisfaction score would you predict for someone with a responsibility score of 40?
- d. What proportion of variation in satisfaction can be explained by perceived responsibility for household duties?
- e. What is the standard error of estimate for this data?
- f. Calculate the F test to determine if a significant proportion of variation in satisfaction can be explained by responsibility. Use $\alpha = .05$.
- g. Calculate the T-test to determine if the regression coefficient differs significantly from zero. use $\alpha = .05$.