Chapter 14
Correlation and Simple Linear Regression

Predicting Number of Minutes at Carolina's

Dominick Aldo owns and operates Carolina's which is an Italian restaurant in New York. The data below show the number of minutes that people spend at their table based on table size.

Table Size	Minutes
2	103
2	100
2	108
2	101
2	103
2	84
2	89
2	79
2	88
2	95
2	89
2	85
2	90
2	90
2	90
2	79
2	88
2	82
2	91
2	70
2	95
2	100
2	82
2	81
2	116
2	100
2	88
2	76
2	108
2	97
2	87
2	83
2	82

2	89
2	90
3	75
3	87
3	102
3	87
3	98
3	103
3	85
3	92
3	99
3	84
3	91
3	101
4	90
4	85
4	92
4	109
4	99
4	98
4	97
4	103
4	94
4	105
4	92
4	86
4	92
5	130
5	117
5	73
5	115
5	89
5	105
5	108
5	109
5	101
6	105
6	115
6	99
6	105
6	110
6	121

A) Develop a regression model that will predict the number of minutes that people will spend at their table based on table size using $\alpha = 0.05$.

B) Establish the table time for a party of four people using $\alpha = 0.05$.

C) Establish a 95% confidence interval to predict the number of minutes that an average table will spend in the restaurant.

D) Establish a 95% confidence interval to predict the number of minutes that a specific table will spend in the restaurant.