Lab 2

The data below gives heights and self-esteem scores for 25 young men. Use the date below and:

(1) Save the data to excel and read into R for analysis.
(2) Calculate the mean and standard deviation for both heights and self-esteem scores.
(3) To get a sense of the data, generate a scatterplot (using an appropriate window, label the axes, and title the graph). Consciously decide which variable should be on the x-axis and which should be on the y-axis. Using the scatterplot, describe the form, direction, and strength of the association between the variables.
(4) Calculate the correlation coefficient. What does the correlation tell us?
(5) Using the results from (2) and (4), compute by hand the values for for β_1 and β_0.
(6) Find the equation of the least squares regression equation. Add the regression line to the scatterplot you generated above.
(7) What was the estimate for β_1? How can we interpret this value? What is the estimate for β_0? What is the interpretation of this value?

Data:

height	selfesteem
68	4.1
71	4.6
62	3.8
75	4.4
58	3.2
60	3.1
67	3.8
68	4.1
71	4.3
69	3.7
68	3.5
67	3.2
63	3.7
62	3.3
60	3.4
63	4
65	4.1
67	3.8
63	3.4
61	3.6
58	3.6
70	4.3
67	3.3
65	3.5
64	4.2