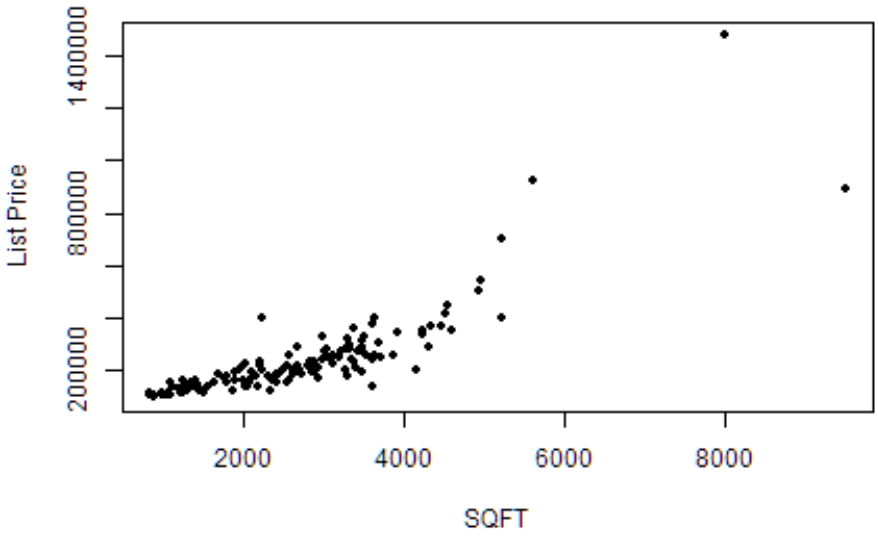
Lesson 21: Describing Bivariate Data; Scatterplots, Correlation, and Covariance

Homework

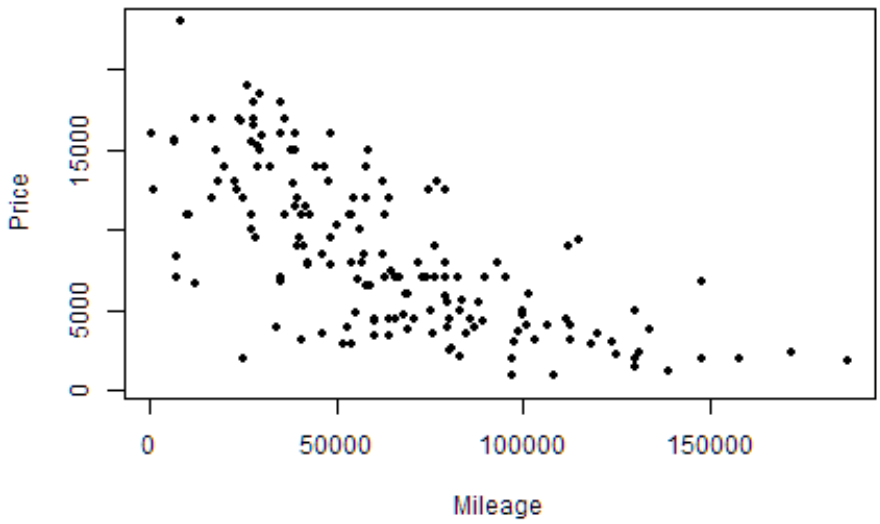
Solutions

Please note that the steps show rounded numbers, but that the final answers to the problems are calculated without rounding.

Problem	Part	Solution
1	-	Linear, moderate negative association.
2	-	Linear, strong positive association.
3	-	Linear, moderate positive association.
4	-	Nonlinear.
5	-	Linear, moderate positive association.
6	-	Linear, weak positive association.
7	-	c. There is a strong negative linear relationship between the variables.



8	-	
9	-	Answers will vary. One plausible answer is that it does appear to be linear, with a strong positive association. You may also see slight curve to the data.
10	-	$r = 0.843$
11	-	If in answer to question 9 you said that the data appear to show a strong positive association that is supported by $r = 0.843$ because it is a positive number and it is close to 1.
12	-	$Sxy = 178,852,397$

Problem	Part	Solution
		
13	-	
14	-	Answers will vary. One plausible answer is that it does appear to be linear, with a moderate negative association.
15	-	$r = -0.687$
16	-	If in answer to question 14 you said that the data appear to show a moderate negative association that is supported by $r = -0.687$ because it is a negative number and it is right in between 0 and -1.
17	-	$Sxy = -126,615,794$