For the following residual plots, is the line of best fit an appropriate model? Explain why or why not?

Versus Fits (response is EnergyConsumption)	
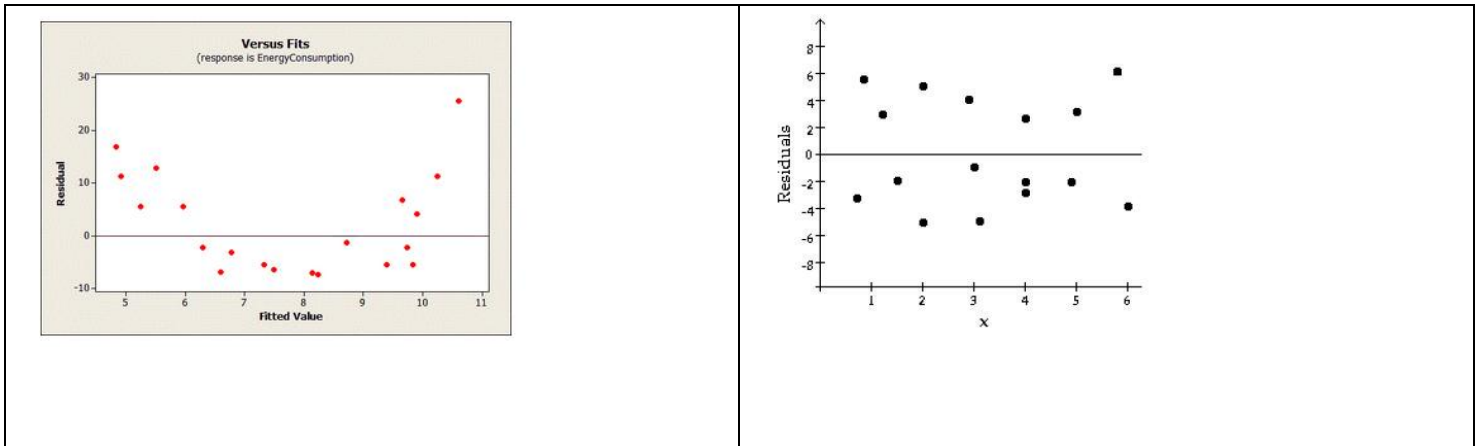
6. When the actual value is less than the predicted value, the residual will be...
   a. Positive
   b. Negative
   c. Small
   d. Large
   e. Zero

7. When the actual value is the same as the predicted value, the residual will be...
   a. Positive
   b. Negative
   c. Small
   d. Large
   e. Zero

Estimate the correlation coefficient.

a. 0.3
b. -0.3
c. 0.8
d. -1

Estimate the correlation coefficient.

   a. 0.8
   b. 1
   c. 0.3
   d. 0

Make a two-way relative frequency by row table, column table, and a relative frequency table from the table below. Do medical helicopters save lives? Mode of transportation vs mortality of patient.

	Helicopter	Road	Total
Victim died	64	260	
Victim lived	136	840	
Total	200	1100	1300

Write an observation from the joint relative frequencies of each table.

Row:

Column:

General:

Row

	Helicopter	Road	Total
Victim died			
Victim lived			
Total			

Column

	Helicopter	Road	Total
Victim died			
Victim lived			
Total			

General

	Helicopter	Road	Total
Victim died			
Victim lived			
Total			

Create a histogram for the following data regarding the duration in seconds of roller coaster rides in California. This data is actually real! Remember to label and scale your axes.

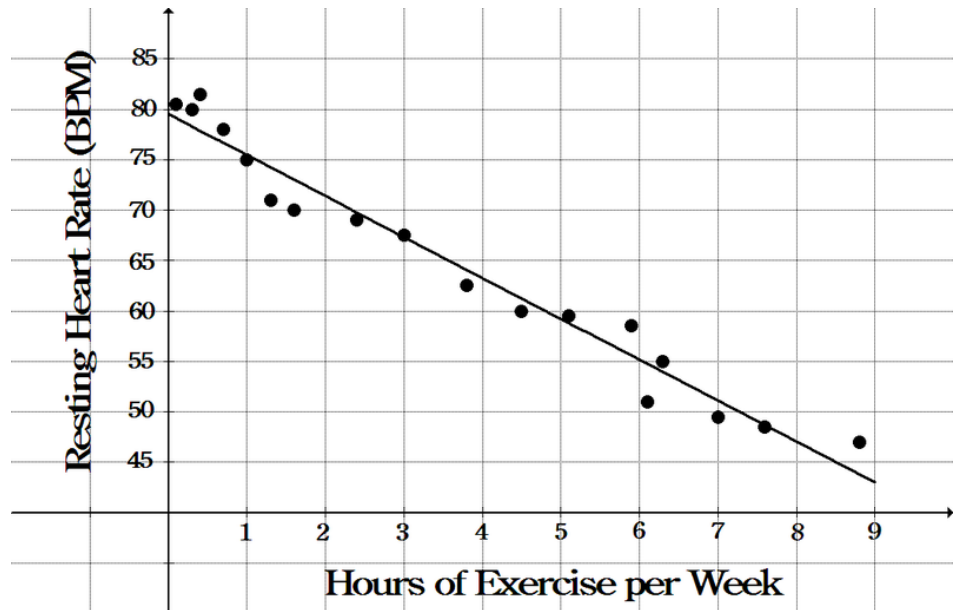| 28	96	132	160
36	105	132	160
44	108	134	168
44	111	146	180
55	112	150	180
62	116	150	180
90	120	150	180
90	120	150	195
92	120	156	300
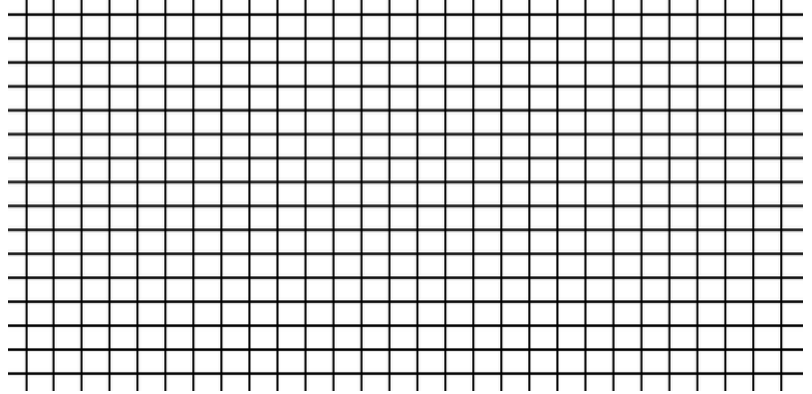
Answer the following questions about the graph below.

The line of best fit can be modeled by
y = -3.982x + 79.8

Explain in words the meaning of the slope.

Explain in words the meaning of the y-intercept.

If a person exercises 6 hours per week, what is the resting heart rate that would be predicted by the line of best fit?

If a person has a resting heart rate of 70 BPM, what is the predicted number of hours the person exercises per week according to the line of best fit?

Follow the steps below to find the standard deviation of Rachel's data. The chart below may help organize the process (x represents each individual data item, μ is the mean of the data)

1. Find the mean, μ
2. Find the difference between each data item and the mean, $x - \mu$
3. Square each of the differences, $(x - \mu)^2$
4. Find the average (mean) of these squared differences.
5. Take the square root of this average.

x	1. $x - \mu$	2. $(x - \mu)^2$
36		
70		
80		
85		
110		
130		
137		
138		
138		
140		

3. Mean or μ = _____

4. mean of these squared differences = _____

5. standard deviation = _____

Estimate the following statistics for the female and male distribution below.
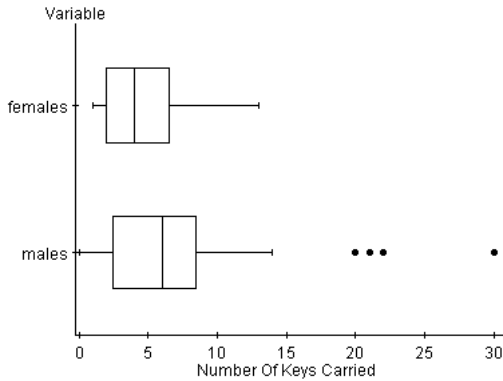
Female	
Min	
Q1	
Median	
Q3	
Max	
IQR	
Range	

Male	
Min	
Q1	
Median	
Q3	
Max	
IQR	
Range	

Compare the distributions of the number of keys males carry with the number of keys females carry. Address shape, center, and spread.