AP Statistics

2019-01-28 3.2 Assignment

By: **Noah Overcash**

Pg. 191-197 35,37,39,41,45,53,60,63,68,71-78

Question 35

y = 80 - 6x

Question 37

Part A

1.109. This value gives the amount the highway MPG increases for each increment of the city MPG.

Part B

4.62. The intercept is not statistically meaningful as no car would have a city MPG of 0

Part C

16 city MPG: 22.364 MPG

28 city MPG: 35.672 MPG

Question 39

Part A

-0.0053; this means that the pH level of the rain is predicted to decrease by 0.0053 every week.

Part B

5.43; this is the initial pH of the rain 0 weeks into the study

Part C

$\hat{}pH = 4.635$

Question 41

No; 1000 months is over 4000 weeks while the regression line is only based on 150 weeks. 1000 months would be far too much extrapolation.

Question 45

$\hat{}pH(50) = 5.165$

Residual = -0.085

This value shows that the predicted pH was 0.085 higher than the measured result.

Question 53

Part B

y = 84.454 - 1.843x

Part C

The y-intercept tells the percent return if there were no new adults. The slope tells us the change in percent return per new adult.

Part D

13

Question 60

This shows that, from 0-40, the residuals were lowest (so the regression line was closest) and, around 80, the data was farther from the regression line (higher residuals). However, overall, the trend line fits well as there is an even clustering on each side.

Question 63

Part A

y = 157.68 - 2.9935x

Part B

63.1%

Part C

-0.794. It is negative as the slope is negative.

Part D

This the standard deviation of the sample, showing that most of the percents were within 9.46 of the mean.

Question 68

Weight and medical issues that may change digestion/bloodflow.

Question 71: **B**

Question 72: **C**

Question 73: **A**

Question 74: **A**

Question 75: **B**

Question 76: **A**

Question 77: **C**

Question 78: **A**