

A. Correlation: $r = -0.874$. There is a very strong negative correlation between advertised price and number of miles.

B. $\hat{y} = 18773 - 86.13x$

\hat{y} = predicted advertised price

x = thousands of miles

C. The y intercept= 18773, which is the predicted cost of a used 2005-2009 Honda CR-V with 0 miles. This has no practical interpretation; a car that is at least 8 years old probably has some miles on it.

D. The slope = -86.18, which tells us that the predicted price of a used 2005-2009 Honda CR-V goes down by \$86.18 for each additional thousand miles driven.

- A. The equation of the regression line is $\hat{y} = 181.2 + 15.2x$, where \hat{y} is the hours of freshness and x is the amount of sugar in tablespoons.
- B. As evidenced by the residual plot, a linear plot is appropriate for this data set because the residual plot demonstrates no pattern. Additionally, there are approximately equal values of positive and negative residuals, which means the data is evenly distributed above and below the regression equation.

C. The standard error of the regression, “s”, is 7.5296. On average, when we use the amount of sugar added to the water to predict the number of hours of freshness, the prediction will be off by 7.52596 hours.

D. $R^2 = 86.0\%$. 86.0% of the variation in number of hours of freshness is explained by the amount of sugar in the vase.