

The following problems use the data in the table below showing the weight of a female golden retriever puppy.

Days old	1	2	3	4	5	6	7	8	9	10	11	12
Weight (oz)	12.51	13.83	14.94	16.3	17.98	19.56	21.13	22.96	24.22	26.53	28.57	30.33
Residuals												

1. Create a scatterplot for this data.
2. The LSRL for this data is  $y = 1.63x + 10.15$ . Interpret the slope and y-intercept.
3. The correlation coefficient for this data and your LSRL is  $r = 0.997$ ? What does this tell you?
4. What is the value of  $R^2$ ? Interpret what this means for this situation.
5. Complete the third row of the table for the residuals. Based on the residuals (and the residual plot), do you think a LSRL is the best model for this data? Why or why not? Explain.
6. What would be the equations for the upper and lower bounds for the LSRL?
7. Does this model imply that the number of days old a puppy is, causes the weight of the puppy? Explain.
8. Explain the strengths and weaknesses of using the LSRL to model this data. Do you feel comfortable using it to make predictions? Explain.