

Homework 6.6 Correlation Coefficient

Terin is moving from the city of Atlanta into the Lithia Springs area and wanted to determine if there is a relationship between the housing outside the city with their price. The table below was given to Terin by a real estate agent for him to review.

Distance from ATL (X)	12	15	28	20	5	9	25	2	13	10	18	8
Median home price (in 1000s)(Y)	390	400	310	290	410	400	300	490	370	350	320	400

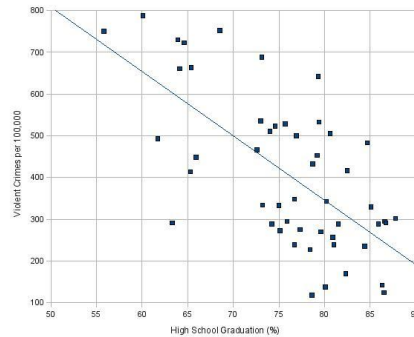
- Write the equation of the line of best fit modeling this table. _____
- Use the equation to predict the median housing prices in an area 33 miles from Atlanta. _____
- What is the value of the correlation coefficient? _____
- What is the strength of the data (i.e. strong, weak)? _____
- What is the direction of the data (i.e. positive, negative, none)? _____

The following chart shows violent crime rates compared to high school graduation for all fifty states.

- Determine if the correlation is positive, negative, or none.

- Identify if the correlation is strong or weak? _____

- Estimate the correlation coefficient. _____



The table below shows the annual cost for a middle-income family to raise a child from birth until adulthood.

family to raise

Child's Age (X)	3	6	9	12	15
Annual Cost (Y)	10,700	11,700	12,600	15,000	16,700

- Write the equation of the line of best fit. _____

Round to the nearest tenth.

- Predict the annual cost for a middle-income family to raise a child who is 18 years old. _____

Round to the nearest tenth.

From the information given,

10. Determine if the correlation is positive, negative, or none.

11. Identify if the correlation is strong or weak? _____

12. Estimate the correlation coefficient. _____

Determine whether each statement has a positive, negative, or no correlation?

13. Amount of exercise and percent of body fat _____

14. A person's age and the number of medical conditions they have _____

15. Temperature and number of ice cream cones sold _____

16. The number of students at Hillgrove and the number of dogs in Atlanta _____

17. Age of a tadpole and the length of its tail _____

