

Correlation Coefficient & Linear of Best Fit HW

Name: _____

1. List the correlation coefficients in order from least to greatest: 0.79, -0.43, -0.4, 0.82, 0.08
2. If the correlation coefficient is .87, is its relationship considered to be strong positive, weak positive, strong negative, weak negative, or no correlation?
3. If the correlation coefficient is -0.03, is its relationship considered to be strong positive, weak positive, strong negative, weak negative, or no correlation?
4. Describe the correlation between hours worked at a job and the money earned.
5. Describe the correlation between the age of students in the class and their height.
6. Describe the correlation between the value of a Honda Accord (car) and its value over time.

7. Match the correlation coefficients to their correct graphs. Write the letter in the space.
-0.85 _____ -0.40 _____ 0 _____ 0.33 _____ 0.87 _____ 0.99 _____



8. Predict the type (positive, negative, no) and strength of correlation (strong, weak) for the following pairs of quantities.
 - a. temperature and time for a cup of coffee left on the counter.
 - b. temperature and time for a pot of cold water placed on a hot stove to boil.
 - c. math test score and height
 - d. amount of money in the bank and the number of days since the last paycheck.

9.

The table below shows the lengths and corresponding ideal weights of sand sharks.

Length	60	62	64	66	68	70	72
Weight	105	114	124	131	139	149	158

Predict the weight of a sand shark whose length is 75 inches.

Equation _____ Weight expected _____

10.

The table below gives the height and shoe sizes of six randomly selected men.

Height	67	70	73.5	75	78	66
Shoe size	8.5	9.5	11	12	13	8

If a man has a shoe size of 10.5, what would be his predicted height?

Equation _____ Height expected _____

11.

The table below gives the number of hours spent studying for a science exam (x) and the final exam grade (y).

X	2	5	1	0	4	2	3
Y	77	92	70	63	90	75	84

Predict the exam grade of a student who studied for 6 hours.

Equation _____ Grade expected _____

12.

A student who waits on tables at a restaurant recorded the cost of meals and the tip left by single diners.

Meal Cost	\$4.75	\$6.84	\$12.52	\$20.42	\$8.97
Tip	\$0.50	\$0.90	\$1.50	\$3.00	\$1.00

If the next diner orders a meal costing \$10.50, how much tip should the waiter expect to receive?

Equation _____ Tip expected _____