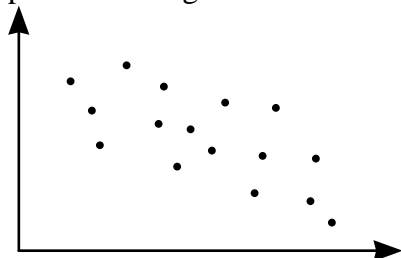


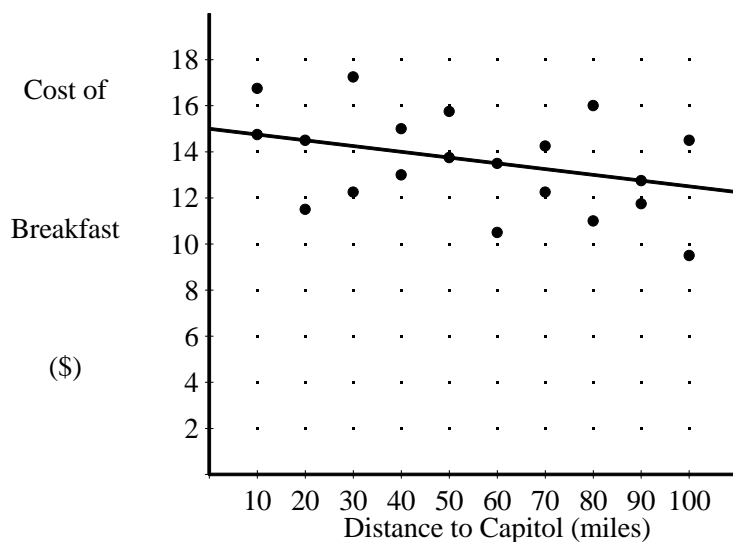
NAME: _____

P.I. A2.S.4: Interpret within the linear regression model the value of the correlation coefficient as a measure of the strength of the relationship

- Classify the scatter plot below as having *positive*, *negative*, or *no correlation*. If the plot has either positive or negative correlation, determine whether the relationship is strong or weak.



2.



- Use the trend line to give the cost of breakfast 120 miles from the capitol.
- Does the pattern of points suggest a moderate or a strong relationship?

NAME: _____

3. Use a graphing calculator to find the equation of the line of best fit for the data below. Tell whether there is a strong correlation between the data.

x	3	7	5	4	6	20	15	12
y	1	8	-1	5	10	18	20	-6

4. Fill in the table below so that the dependent variable, y , shows a weak, negative correlation with the independent variable, x .

x	1	2	3	4	5	6
y	19	?	?	6	?	?

5. Compare the quantities in Column A and Column B.

Column A

Column B

the correlation coefficient

the correlation coefficient

for a strong negative correlation

for a weak positive correlation

[A] The quantity in Column A is greater.

[B] The quantity in Column B is greater.

[C] The quantities are equal.

[D] The relationship cannot be determined from the information given.

[1] weak, negative

[2] a. \$12 b. moderate

[3] $y = 0.9x - 1.1$; no

Answers will vary. One or two y-values should increase. The other y-values should decrease in a random manner.

[4] _____

[5] B