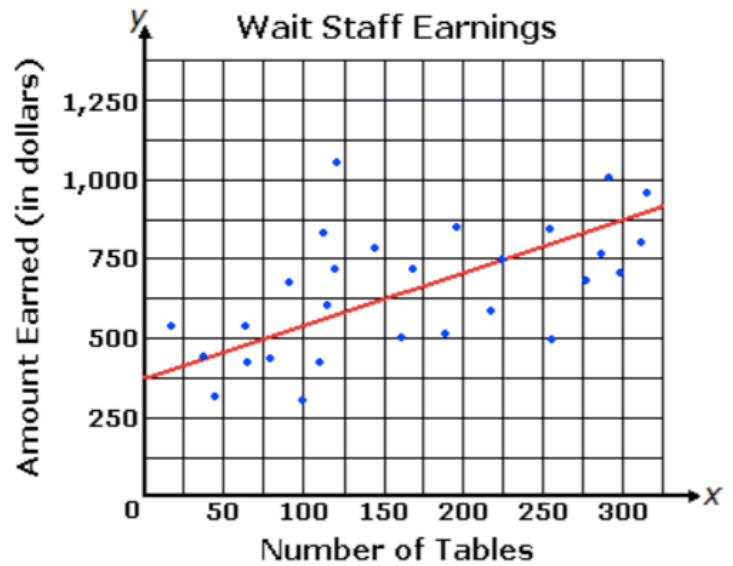


More Inv. 4 and 5 Practice

1. The graph below shows a line of best fit for data collected on the amount earned by servers last week in relation to the number of tables they served.

a. Write the equation for the line of best fit.



b. What does the value of the slope represent in the context of this problem?

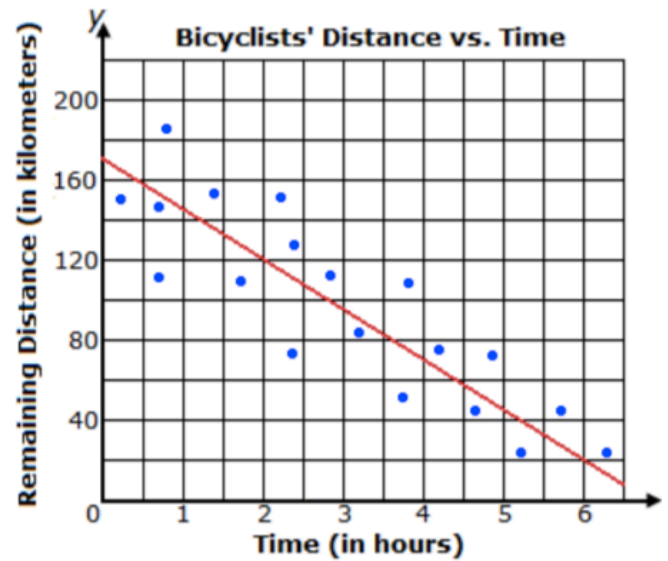
c. What does the value of the y-intercept represent in the context of this problem?

d. Using your model calculate how many tables a server would need to serve to make \$1000 in a week.

e. Use your model to determine how much money would a server make if he was only able to serve 105 tables in the week?

2. The graph below shows a line of best fit for data collected on the distance bicyclists in a race have remaining in relation to the amount of time they have been riding.

a. Write the equation for the line of best fit.



b. What does the value of the slope represent in the context of this problem?

c. What does the value of the y-intercept represent in the context of this problem?

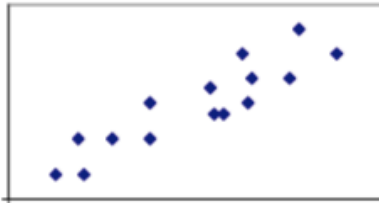
d. Using your model calculate how many kilometers the cyclist has remaining if she has been riding for three hours and forty-five minutes.

e. Use your model to determine if the cyclist is 50 kilometers from the finish, how long has she been riding?

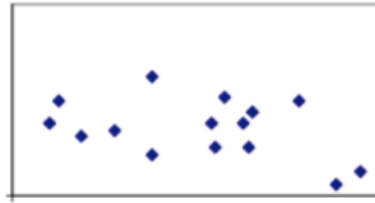
3. Match each scatterplot with the correct correlation coefficient and fill in the table below

Correlation Coefficient	-0.85	-0.50	0	0.40	0.90	0.99
Scatterplot						

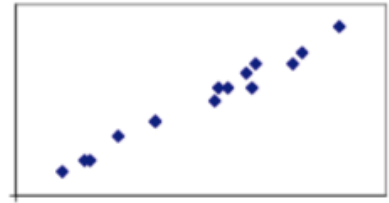
a.



b.



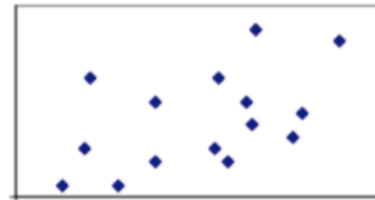
c.



d.



e.



f.



4. List the correlation coefficients in order from least to greatest strength:

0.79 -0.43 -0.4 0.82 0.51 0.08

5. The table to the right gives information about numbers of students who do and don't do chores and do and don't collect allowance.

Are students who do not collect allowance more likely to not do chores?

	Allowance	No Allowance
Do Chores	13	3
Do Not Do Chores	5	4

Is it more likely for a student who does not do chores to collect allowance than it is for a student who does chores to not get an allowance?

6. The two-way table below shows the number of students with each hair color and eye color.

		Hair Color				Total
		Black	Brown	Red	Blond	
Eye Color	Brown	7	12	3	1	23
	Blue	2	8	2	9	21
	Hazel	2	5	1	1	9
	Green	1	3	1	2	7
	Total	12	28	7	13	60

True or false? Provide data to support your claim.

- a. Blonde students are more likely to have blue eyes than brown haired students.

- b. Green eyed students are as likely to have brown hair as brown eyed students are to have red hair.

- c. Students are four times as likely to have brown hair as they are to have red hair.

- d. Blonde haired students are much more likely to have light eyes (blue, hazel, green) than red haired students.

- e. Red haired students are less likely to have blue eyes than brown haired students.

7. 80 students each study one science. The table below gives some information about these students. Complete the table, and then using the data answer the following questions.

	Biology	Chemistry	Physics	Total
Female	18			47
Male			19	
Total		21	33	80

True or False? Provide data to support your claim.

- Women are three times as likely to study Biology as men are to study Chemistry.
- Two and a half times as many women study Chemistry as men.
- Men are almost twice as likely as women to study Physics.