Name **Period**

Int 2 Acc **HW 5-1 Two Way Tables** **Unit 5**

1. One hundred customers in a restaurant were asked whether they liked chicken or beef and whether they liked rice or pasta. Out of 30 customers that liked rice, 20 of them liked chicken. There were 60 customers that liked chicken. Construct a two-way table summarizing the data.

	Chicken	Beef	Total
Rice			
Pasta			
Total			

a. If you're going to have pasta, are you more likely to order chicken or beef?

b. If you're going to order rice, are you more likely to have chicken or beef with it?

c. Compare the percentage of the customers who order rice and also have chicken to the percentage of the customers that order chicken and also have rice.

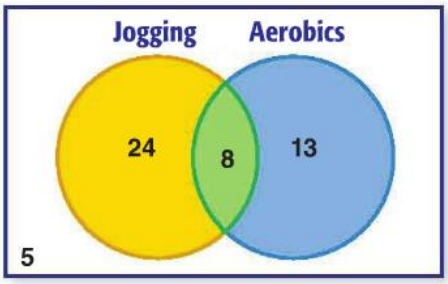
The two-way table shows the number of students that do or do not do chores at home and whether they receive an allowance or not.

	Allowance	No Allowance	Total
Chores	13;	3;	
No Chores	5;	4;	
Total			

2. Compare the percentage of the students who get an allowance and also do chores to the percentage of the students who do chores and also get an allowance.

3. The Venn diagram shows the number of students that exercise different ways. Construct a two-way table that displays the data.

Show your work.



a. Compare the percentage of the students who jog and also do aerobics to the students who jog and do not do aerobics.

b. Compare the percentage of the students who jog and also do aerobics to the student who do aerobics and also jog.

4. The two-way table below shows the number of hours students studied and whether they studied independently or with a study group.

	Studied Less Than 2 Hours	Studied More Than 2 Hours
Studied Independently	12	4
Studied with a Study Group	8	11

a. If a student studied in a group how likely were they to study for more than 2 hours?

b. If a student studied for more than 2 hours how likely were they to study in a group?

c. Which statement seems to be truer? Explain your reasoning.

If a student studied in a group, they were more likely to study more than two hours.

If a student studied for more than two hours, they were more likely to study as a group.

The two-way table shows the places that males and females volunteered in the past month.

	Males	Females	Total
Animal Shelter	26	21	
Hospital	13	17	
Library	9	14	
Total			

5. What is the probability that a woman volunteers at the shelter?

6. What is the probability that a person volunteers at the library?

7. What is the probability that a person who volunteers at the shelter is a male?

8. What is the probability that a male volunteers at the library?

9. What is the probability that a volunteer is a male and serving at the library?

10. What is the probability that a volunteer is male?

11. What is the probability that a female volunteers at the shelter or the hospital?

12. What is the probability that a male does not volunteer at the shelter?

Megan surveyed the 8th grade to find which school activities they attended last weekend. The results are shown in the two-way table.

	Attended the School Play	Did Not Attend the School Play	Total
Attended the Basketball Game	55	63	118
Did Not Attend the Basketball Game	88	15	103
Total	143	78	221

13. Which of the following is a valid conclusion about the data?

Ⓕ Of the students that attended the basketball game, more than half of them also attended the school play.

Ⓖ More than half of the students that were surveyed attended the school play and did not attend the basketball game.

Ⓗ Students that attended the school play were more likely to not attend the basketball game.

Ⓘ Most students did not attend either event.

14. What is the relative frequency of students that attended the basketball game and the school play to the total number of students that attended the school play?

Ⓐ 0.25 Ⓒ 0.47

Ⓑ 0.38 Ⓓ 0.71

Fifty residents of a city were asked which side of town they would rather live in and what community center they would prefer to use. The following chart shows their responses in a two-way table.

	Library	Playground	Rec Center	Total
North	10	8	5	23
South	9	5	13	27
Total	19	13	18	50

15. Calculate the relative frequencies according to place of interest.

16. Calculate the relative frequencies according to side of town.
