

Score: _____
 _____ %

HW 5-2: More Two-Way Tables

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 liked chicken. There were 60 customers that liked chicken. Construct a two-way table summarizing the data. (Example 1)

	Chicken	Beef	Total
Rice	20	10	30
Pasta	40	30	70
Total	60	40	100

2. 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. Find and interpret the relative frequencies of students in the survey by columns. (Example 2)

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

2b. When you look at the relative frequencies by columns, are you doing it according to allowance or chores?

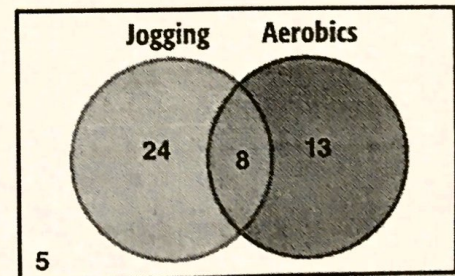
3 The two-way table shows the number of students that message on a daily basis. Find and interpret the relative frequencies of students in the survey by rows. (Example 2)

	Text Message	Instant Message	Total
7 th graders	59; $\frac{59}{84} = 70\%$	25; $\frac{25}{84} = 30\%$	84
8 th graders	59; $\frac{59}{100} = 59\%$	41; $\frac{41}{100} = 41\%$	100
Total	118	66	184

3b. When you look at the relative frequencies by rows, are you doing it according to grade or messaging?

Grade

4. **CCSS Use Math Tools** The Venn diagram shows the number of students that exercise in different ways. Construct a two-way table that displays the data. Find and interpret the relative frequencies by column.



Show your work

8. 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

What is the relative frequency of students that studied independently for more than 2 hours to the total number of students that studied independently?

- (A) 0.4 (C) 0.25
 (B) 0.33 (D) 0.11

9. As each person entered the theater, Aaron counted how many of the 105 people had popcorn and how many had a drink. He found that out of 84 people that had popcorn, only 10 did not have a drink. Six people walked in without popcorn or a drink. Construct a two-way table summarizing the results.

	Popcorn	No Popcorn	Total
Drink	74	15	89
No Drink	10	6	16
Total	84	21	105

10. The two-way table shows the number of Sasha's soccer teammates that are in her Math class and English class.

	Math Class	Not in Math Class
English Class	4	2
Not in English Class	1	3

- a. How many teammates does Sasha have?
 b. What is the relative frequency of teammates that are in both of Sasha's classes to all of her teammates?
 c. Of the teammates in her math class, which percentage is greater: the percentage of teammates that are in her English class or the percentage of teammates that are not in her English class?

11. The two-way table shows the places that males and females volunteered in the past month. Do a greater percentage of males or females volunteer at the animal shelter? Justify your response.

	Males	Females	Total
Animal Shelter	26	21	47
Hospital	13	17	30
Library	9	14	23
Total	48	52	100

Males @ the AS $\frac{26}{48} = 54\%$

Females @ the AS $\frac{21}{52} = 40\%$

Males

Number 14 & 15 are part of the same problem. Use the table to answer both questions.

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

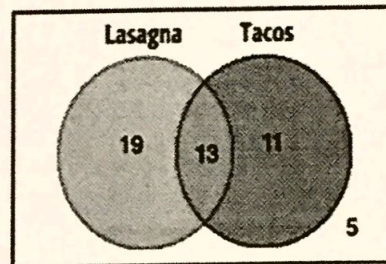
14. What is the relative frequency of students that attended the basketball game and the school play to the total number of students that attended the school play?

- (A) 0.25 (C) 0.47
 (B) 0.38 (D) 0.71

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

- (F) Of the students that attended the basketball game, more than half of them also attended the school play.
 (G) More than half of the students that were surveyed attended the school play and did not attend the basketball game.
 (H) Students that attended the school play were more likely to not attend the basketball game.
 (I) Most students did not attend either event.

16. Short Response The Pep Club was asked to vote for which dinner they would like for their banquet. Construct a two-way table for the information shown in the Venn diagram at the right.



*BONUS:

CCSS Persevere with Problems 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

Which is greater: the percentage of the brown-haired students with blue eyes or the percentage of the red-haired students with brown eyes?