

Name: _____

Date: _____

Reading Two Way Tables Algebra (Grade 8)

A **two-way table** displays two categories of data collected from the same source. You can use a two-way table to draw conclusions about how the categories are related.

Here is an example of a two way table:

You randomly survey students in a school about their last test grade and whether they studied for the test. The results of the survey are shown in the two-way table.

		Student		
		Studied	Did Not Study	
Grade	Passed	21	2	
	Failed	1	6	

Exercise #1: Using the table above answer the following questions:

How many of the students in the survey studied for the test and passed?

Find and interpret the sum of the entries in each row and column.

Exercise #2:

ATTENDANCE You randomly survey students in a cafeteria about their plans for a football game and a school dance. The results of the survey are shown in the two-way table.

- How many of the students in the survey are attending the dance but not the football game?
- Find and interpret the sum of the entries in each row and column.
- What percent of the students in the survey are not attending either event?

		Football Game	
		Attend	Not Attend
Dance	Attend	35	5
	Not Attend	16	20

Exercise #3:

You randomly survey students between the ages of 12 and 17 about whether they ride the bus to school in the morning. The results are shown in the tally sheets.

Make a two-way table including the totals of the rows and columns.

		Rides bus		
		Age	Tally	
	12-13	///	///	///
	14-15	///	///	
	16-17	///	///	///

		Age			Total
		12-13	14-15	16-17	
Student	Rides Bus				
	Does Not Ride Bus				
Total					

For each age group, what percent of the students in the survey ride the bus to school? do not ride the bus to school? Organize the results in a two-way table. Explain what one of the entries represents.

		Does not ride bus		
		Age	Tally	
	12-13	///	///	
	14-15	///	///	///
	16-17	///	///	///

		Age		
		12-13	14-15	16-17
Student	Rides Bus %			
	Does Not Ride Bus %			

Exercise #4:

You randomly survey students in a school about whether they buy a school lunch or pack a lunch. Your results are shown.

- Make a two-way table that includes the marginal frequencies.
- For each grade level, what percent of the students in the survey pack a lunch? buy a school lunch? Organize the results in a two-way table. Explain what one of the entries represents.
- Does the table in part (b) show a relationship between grade level and lunch choice? Explain.

		Grade			Total
		6	7	8	
Student	Buys Lunch				
	Packs Lunch				
Total					

Grade 6 Students: 11 pack lunch, 9 buy school lunch
Grade 7 Students: 23 pack lunch, 27 buy school lunch
Grade 8 Students: 16 pack lunch, 14 buy school lunch

		Grade		
		6	7	8
Student	Buys Lunch %			
	Packs Lunch %			