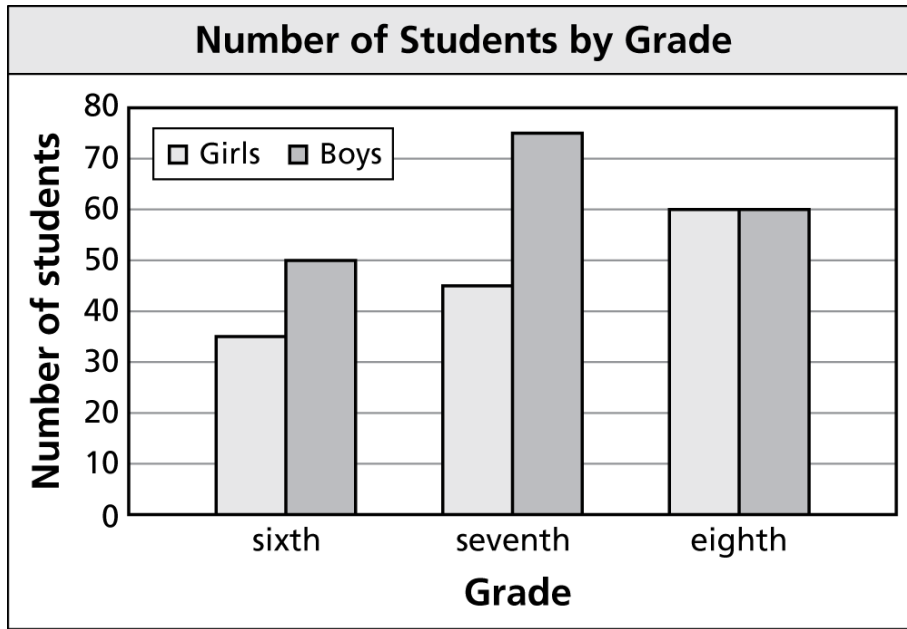


**9.3**

# **Two Way Tables**

# Warm Up Activities

With your partner, use the double bar graph to complete the table.



	Boys	Girls
6th grade		
7th grade		
8th grade		

# Warm Up Activities

With your partner, use the table to complete the following.

		Been outside the U.S.?	
		Yes	No
Speak more than one language?	Yes	12	4
	No	18	12

- How many people surveyed speak more than one language?
- How many people surveyed have never traveled outside of the U.S.?
- How many people only speak one language and have traveled outside of the U.S.?

# Two-Way Tables

A **two-way table** displays two \_\_\_\_\_ of data collected from the same source.

The following is a survey of students regarding their grades on the last test and whether they studied for the test. The two-way table shows your results.

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

Each entry in the table is called a \_\_\_\_\_.

# Finding Marginal Frequencies

Marginal frequencies are basically the \_\_\_\_\_ of each column and row.

**Find and interpret the marginal frequencies for the survey.**

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

# Practice

Use the two-way table to complete the following:

1) Find the total of each row and column.

		Fundraiser	
		No	Yes
Gender	Female	22	51
	Male	30	29

2) What are these totals called?

3) How many female students will be participating in the fundraiser?

4) How many male students will not be participating in the fundraiser?

# Practice

5) Find and interpret the marginal frequencies for the following two-way table.

---

---

---

---

---

---

---

---

---

---

		School Play	
		Attend	Not Attend
Class	Junior	41	30
	Senior	52	23

# Practice

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

a) Make a two-way table that includes the marginal frequencies.

	<u>Grade 6 Students</u>
	11 pack lunch, 9 buy school lunch
	<u>Grade 7 Students</u>
	23 pack lunch, 27 buy school lunch
	<u>Grade 8 Students</u>
	16 pack lunch, 14 buy school lunch


b) For 6<sup>th</sup> grade level, what percent of the students in the survey pack a lunch? buy a school lunch?



# Practice

7) You randomly survey students between the ages of 12 and 17 about whether they ride the bus to school. The results are shown in the tally sheets. Make a two-way table that includes the marginal frequencies.

Age	Tally
12-13	             
14-15	       
16-17	       

Age	Tally
12-13	       
14-15	       
16-17	             

# Practice

8) a) 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.

Age	Tally
12-13	
14-15	
16-17	

Age	Tally
12-13	
14-15	
16-17	

Students				

b) Does the table in part (a) show a relationship between age and whether students ride the bus to school? Explain.