

## Lesson 3 Reteach

### Two-Way Tables

#### Example 1

Marisa surveyed students at her school. She found that 30 out of 75 seventh graders buy their lunch. There are 25 out of 76 eighth graders who do not buy their lunch. Construct a two-way table summarizing the data.

**Step 1** Create a table using the two-categories: buy lunch and grade level. Fill in the table with the given values.

**Step 2** Use reasoning to complete the table. Remember, the totals are for each row and column. The column labeled “Total” should have the same sum as the row labeled “Total.”

	Buy Lunch	Do Not Buy Lunch	Total
Seventh Graders	30	45	75
Eighth Graders	51	25	76
Total	81	70	151

#### Example 2

Find and interpret the relative frequencies of seventh graders in the survey from Example 1 by row. Round to the nearest hundredth if necessary.

	Buy Lunch	Do Not Buy Lunch	Total
Seventh Graders	$30; \frac{30}{75} = 0.40$	$45; \frac{45}{75} = 0.60$	$75; \frac{75}{75} = 1.00$
Eighth Graders	$51; \frac{51}{76} \approx 0.67$	$25; \frac{25}{76} \approx 0.33$	$76; \frac{76}{76} = 1.00$
Total	81	70	151

Sample answer: Less than half of the seventh graders and more than half of the eighth graders buy their lunch.

#### Exercise

Find and interpret the relative frequencies of seventh graders in the survey from Example 1 by column. Round to the nearest hundredth if necessary.

“Buy Lunch” column:  $\frac{30}{81} \approx 0.37$ ,  $\frac{51}{81} \approx 0.63$ ,  $\frac{81}{81} = 1.00$ ; “Do Not Buy Lunch” column:  $\frac{45}{70} \approx 0.64$ ,  $\frac{25}{70} \approx 0.36$ ,  $\frac{81}{81} = 1.00$ ; Sample answer: Overall, more than half of the students surveyed buy their lunch.