

Lesson 3 Problem-Solving Practice

Two-Way Tables

Solve.

1. Ricardo surveyed 110 eighth grade students to find out if they have a parttime job. There are 60 students who have a part-time job, including 48 honor roll students. Half of the students who do not have a job are on the Honor Roll. Construct a two-way table summarizing the data.

	On Honor Roll	Not on Honor Roll	Total
Job	48	12	60
No Job	25	25	50
Total	73	37	110

Customers entering a store were asked what electronic technology they own. The results of the survey are shown at the right. For Exercises 2 and 3, round relative frequencies to the nearest hundredth if necessary.

	E-Reader	No E-Reader	Total
Laptop	20	8	28
No Laptop	45	22	67
Total	65	30	95

2. Find and interpret the relative frequencies by row.
 $\frac{20}{28} \approx 0.71, \frac{8}{28} \approx 0.29, \frac{28}{28} = 1.00;$
 $\frac{45}{67} \approx 0.67; \frac{22}{67} \approx 0.33, \frac{67}{67} = 1.00;$
Sample answer: Over two-thirds of the customers who own laptops also own E-readers. Almost two thirds of the customers who do not own laptops own E-readers.

3. Find and interpret the relative frequencies by column.
 $\frac{20}{65} \approx 0.31, \frac{45}{65} \approx 0.69, \frac{65}{65} = 1.00;$
 $\frac{8}{30} \approx 0.27, \frac{22}{30} \approx 0.73, \frac{30}{30} = 1.00;$
Sample answer: Less than one third of the customers who own E-readers own laptops. Over two thirds of the customers who do not own E-readers do not own laptops.