

3. The table shows the results of a poll of randomly selected high school students who were asked if they prefer to hear all-school announcements in the morning or afternoon.

	Underclassmen	Upperclassmen
Morning	8	14
Afternoon	18	10

Make a table of the joint and marginal relative frequencies.


4. **Customer Service** The table shows the results of a customer satisfaction survey for a cellular service provider, by location of the customer. In the survey, customers were asked whether they would recommend a plan with the provider to a friend.

	Arlington	Towson	Parkville
Yes	40	35	41
No	18	10	6

Make a table of the joint and marginal relative frequencies. Round to the nearest hundredth where appropriate.

5. **School** Pamela has collected data on the number of students in the sophomore class who play a sport or play a musical instrument.

		Plays a sport	
		Yes	No
Plays an instrument	Yes	47	38
	No	51	67



- a. Copy and complete the table of the joint and marginal relative frequencies. Round to the nearest hundredth where appropriate.

		Play Sport		
		Yes	No	Total
Play instrument	Yes			
	No			
	Total			

- b. If you are given that a student plays an instrument, what is the probability that the student also plays a sport? Round your answer to the nearest hundredth.
- c. If you are given that a student plays a sport, what is the probability that the student also plays an instrument? Round your answer to the nearest hundredth.

6. **Business** Roberto is the owner of a car dealership. He is assessing the success rates of his top three salespeople in order to offer one of them a promotion. Over two months, for each attempted sale, he records whether the salesperson made a successful sale or not. The results are shown in the chart below.

	Successful	Unsuccessful
Becky	6	6
Raul	4	5
Darrell	6	9

- Make a table of the joint relative frequencies and marginal relative frequencies. Round to the nearest hundredth where appropriate.
 - Find the probability that each salesperson will make a successful sale. Round to the nearest hundredth where appropriate.
 - Determine which salesperson has the highest success rate.
7. **Fundraising** The table shows the number of T-shirts and sweatshirts sold at a fundraiser during parent visitation night at Preston High School.

	Students	Adults
T-Shirts	16	23
Sweatshirts	7	14

Make a table of the joint relative frequencies and marginal relative frequencies.

8. **Write About It** Describe in your own words the process you use to write marginal relative frequencies for data given in a two-way table.

9. **Customer Service** The claims handlers at a car insurance company help customers with insurance issues when there has been an accident, so their customer service skills are very important.

The claims handlers at the Trust Auto Insurance Company are divided into three teams. For one month, a customer satisfaction survey was given for each team. The results of the surveys are shown below.

	Satisfied	Dissatisfied
Team 1	20	8
Team 2	34	12
Team 3	34	10

- Make a table of the joint relative frequencies and marginal relative frequencies. Round to the nearest hundredth where appropriate.
- Find the probability that a customer will be satisfied after working with each team. Round to the nearest hundredth where appropriate.
- Determine which team has the highest rate of customer satisfaction.