

**LESSON**  
**14-3**

**Practice A**  
**Two-Way Tables**

1. The table shows the results of a survey of 100 randomly-selected people entering an amusement park who were asked whether they were planning to ride the Monster Loop, a rollercoaster. Make a table of joint and marginal relative frequencies. The table has been started for you.

	Ages 8–15	Ages 16–25	Ages 26–35	36 and Older
Yes	19	23	8	14
No	8	11	12	5

	Ages 8–15	Ages 16–25	Ages 26–35	36 and Older	Total
Yes	0.19				0.64
No					
Total					1

2. Thomas collected data on 25 randomly selected 17-year-olds at his school, and summarized the results in a table.

		Has a Driver's License	
		Yes	No
Has a Job	Yes	9	3
	No	8	5

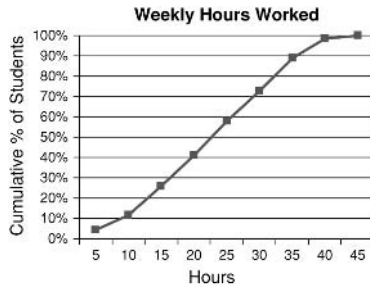
- a. Make a table of the joint relative frequencies and marginal relative frequencies. Round to the nearest hundredth where appropriate. The table has been started for you.

		Has a Driver's License		Total
		Yes	No	Total
Has a Job	Yes		0.12	
	No			
	Total	0.68		1

- b. If you are given that a 17-year-old has a job, what is the probability that the 17-year-old also has a driver's license? Divide a joint relative frequency by a marginal relative frequency to find the answer. Round your answer to the nearest hundredth.

- c. If you are given that a 17-year-old has a driver's license, what is the probability that the 17-year-old also has a job? Divide a joint relative frequency by a marginal relative frequency to find the answer. Round your answer to the nearest hundredth.

7.



8. 40–44

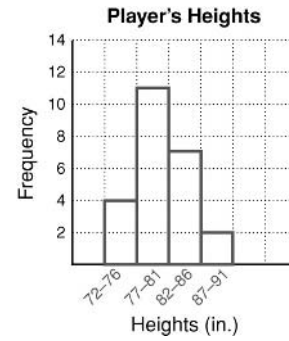
9. 10–34

**Problem Solving**

1.

Players' Heights	
Heights (in.)	Frequency
72-76	4
77-81	11
82-86	7
87-91	2

2.



3. C

4. G

**Reading Strategies**

1. 3;

11, 11, 15, 16, 20, 28, 28, 48, 49, 49, 55, 56, 62

2. Group 2; 4

3.

3, 4, 5, 6, 7, 8, 9, 10; 4

4.

**Weights**

13	8	9	9						
14	2	3	4	4	5	6	6	8	9
15	0	0	1						

Key: 14|2 means 142 lb

**14-3 TWO-WAY TABLES**

**Practice A**

1.

	Ages 8–15	Ages 16–25	Ages 26–35	36 and Older	Total
Yes	0.19	0.23	0.08	0.14	0.64
No	0.08	0.11	0.12	0.05	0.36
Total	0.27	0.34	0.2	0.19	1

2 a.

		Has a Driver's License		
		Yes	No	Total
Has a Job	Yes	0.36	0.12	0.48
	No	0.32	0.20	0.52
	Total	0.68	0.32	1

- b. 0.75
- c. 0.53

**Practice B**

1.

	<b>Ages 10–20</b>	<b>Ages 21–45</b>	<b>Ages 46–65</b>	<b>65 and Older</b>	<b>Total</b>
<b>Yes</b>	0.13	0.02	0.08	0.24	0.47
<b>No</b>	0.25	0.10	0.15	0.03	0.53
<b>Total</b>	0.38	0.12	0.23	0.27	1

2 a.

**Owns an MP3 player**

		<b>Yes</b>	<b>No</b>	<b>Total</b>
<b>Owns a Smart Phone</b>	<b>Yes</b>	0.28	0.12	0.40
	<b>No</b>	0.34	0.26	0.60
	<b>Total</b>	0.62	0.38	1

- b. 0.45
- c. 0.70

**Practice C**

1 a.

**Planning to Go to College**

		<b>Yes</b>	<b>No</b>	<b>Total</b>
<b>Planning to Move Out</b>	<b>Yes</b>	0.4	0.2	0.6
	<b>No</b>	0.3	0.1	0.4
	<b>Total</b>	0.7	0.3	1

b. It is more likely that an underclassman planning to move out is planning to go to college. The probability that an underclassman planning to go to college is planning to move out is approximately 0.57, whereas the probability that an underclassman planning to move out is also planning to go to college is approximately 0.67.

2.

**Usually Buys Yogurt**

		<b>Yes</b>	<b>No</b>
<b>Preferred Brand</b>	<b>New</b>	20	11
	<b>Leading</b>	12	7