

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Two-way Frequency Charts

**Practice 1:** Here is the data from Coach Oldham's ten-point quiz. Students need a 6 or better to pass the quiz.

1 <sup>st</sup> Block Math	2 <sup>nd</sup> Block Math	3 <sup>rd</sup> Block Math
6, 4, 3, 7, 5, 9, 5, 4, 6, 6, 8, 5, 7, 3, 6, 2, 8, 7, 10, 9	3, 3, 8, 6, 6, 9, 5, 8, 5, 3, 5, 5, 7, 5, 7	9, 8, 10, 5, 9, 7, 8, 9, 8, 3, 8, 10, 8, 7, 5

**1. Make a two-way frequency table showing how many students passed the quiz and how many failed in each class.**

	1 <sup>st</sup> Block	2 <sup>nd</sup> Block	3 <sup>rd</sup> Block	Total
Passed				
Failed				
Total				

**2. Use a colored pencil to lightly shade the cells containing the JOINT frequency numbers in the table. Using a different color, shade in the MARGINAL frequency numbers in the table.**

**3. If Coach Oldham wanted to know how many students from all 3 classes passed the quiz, where would she look? Explain.**

**4. How many total students failed?**

**5. How many total students took the quiz in 2<sup>nd</sup> block?**

**6. How many students failed the quiz in 3<sup>rd</sup> block?**

**7. Given that a student was in 2<sup>nd</sup> period, what is the probability of them passing?**

**7. Of all the failures, what is the probability of them being from 3<sup>rd</sup> block?**

**8. Of all of 1<sup>st</sup> block, what is the percentage of those who passed the quiz?**

**9. What total percentage of students passed the quiz?**

**10. What percentage of students failed the quiz from 1<sup>st</sup> block?**

**11. What total percentage of students were from 3<sup>rd</sup> block?**

**Collecting Data:**

Coach Oldham's class wanted to know about the connection between students who have iPhones and students who own Beats headphones. Take a survey of the class to determine the totals of the following.

	iPhone	No iPhone	
Beats			
No Beats			

- 12. What is the probability that a student had beats and an iPhone?
- 13. What is the probability that a student does not have an iPhone or beats?
- 14. If Coach Oldham noticed that someone did not have an iPhone, what is the probability that they did have Beats?
- 15. Out of the students who had Beats, what is the probability that they did not have an iPhone?
- 16. Coach Oldham randomly selected a student, what is the probability that the student had an iPhone.

Dr. McDougal conducted a survey of people out of dress code and what grade they were in. Of the 146 students she saw in the morning, 17 freshmen were out of dress code while 23 were in dress code. There were 8 sophomores out of dress code and 11 were in dress code. There were 37 juniors and none of them were out of dress code. There was an equal number of seniors in dress code and out of dress code.

	In dress code	Out of dress code	total
Freshman			
Sophomore			
Juniors			
Seniors			
total			

- 17. What is the probability of being a freshman if you were found to be out of dress code?
- 18. What is the probability of being out of dress code?
- 19. If a student was a sophomore what is the probability that they were in dress code?
- 20. What is the probability that an underclassman (freshmen and sophomores) was out of dress code?
- 21. What is the probability that an upper classman was out of dress code?