NAME: Period: SCORE:\_\_\_\_\_/\_\_\_\_\_\_=\_\_\_\_\_\_%=\_\_\_\_\_\_

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| **Sec 1** | **HW 8-4**  **Two-Way Tables** | **Unit 8** |

**Here is the data from Mr. Austin’s ten-point quiz. Students needed to score a 6 or better to pass the quiz.**

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| --- | --- | --- |
| **1st Period Math** | **2nd Period Math** | **3rd Period 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.

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|  | **1st Period** | **2nd Period** | **3rd Period** | **Total** |
| **Passed** |  |  |  |  |
| **Failed** |  |  |  |  |
| **Total** |  |  |  |  |

1. Use a colored pencil to lightly shade the cells containing the *joint frequency* numbers in the table. The un-shaded numbers are the *marginal frequencies*. (Use these terms to answer the following questions.)
2. If Mr. Austin wanted to see how many students in all 3 classes combined passed the quiz, where would he look?
3. If Mr. Austin wanted to write a ratio of the number of passing students compared to the number of failing students for each class, where would he find the numbers he would need to do this?
4. This table represents survey results from a sample of students regarding mode of transportation to and from school.

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| --- | --- | --- | --- | --- | --- |
|  | **Walk** | **Bike** | **Car Pool** | **Bus** | **Total** |
| **Boys** | 37 | 47 | 27 | 122 | 233 |
| **Girls** | 38 | 22 | 53 | 79 | 192 |
| **Total** | 75 | 69 | 80 | 201 | 425 |

* 1. What percent of boys prefer walking to school?
  2. What percent of girls prefer taking the bus to school?
  3. What percent of everyone car pooled?
  4. What is the most preferred mode of transportation for girls and for boys?

1. The two-way table below contains survey data about boys and girls shoes.

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| --- | --- | --- | --- | --- |
|  | **Athletic shoes** | **Boots** | **Dress Shoe** | **Total** |
| **Girls** | 21 | 35 | 60 | 116 |
| **Boys** | 50 | 16 | 10 | 76 |
| **Total** | 71 | 51 | 70 | 192 |

* 1. What percent of students are girls who prefer boots?
  2. What percent of students are boys who prefer athletic shoes?
  3. What percent of total people liked boots?
  4. What percent of total people were girls?

2.

3.

4.

1. Your eighth grade class went to a water park. Out of the 65 students who went to the park, 17 swam in the wave pool. There were a total of 46 students who rode down the water slide and 16 of those also swam in the wave pool. Construct a two-way table to summarize the data.

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1. What percent of the total students went in the wave pool?
2. What percent of the students that went in the wave pool also went down the water slide?
3. What percent of total students did not go in the wave pool or down the water slide?
4. What percent of students that went down the water slide did not go in the wave pool?
5. Felipe surveyed students at his school. He found that 78 students own a cell phone and 57 of those students also own an mp3 player. There are 13 students that do not own a cell phone, but own an mp3 player. Nine students do not own either device. Construct a two-way table summarizing the data.

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| --- | --- | --- | --- |
|  | **MP3 Player** | **No MP3 Player** | **Total** |
| **Cell Phone** | 57 |  | 78 |
| **No Cell Phone** | 13 | 9 |  |
| **Total** |  |  |  |

1. What percent of total students own an mp3 player?
2. What percent of students that own a cell phone also own an mp3 player?
3. What percent of students that do not own an mp3 players do not own a cell phone either?

The data from a survey of 440 students are shown in the Venn diagram. The students were asked whether or not they were on the honor roll and whether or not they played a sport.

**Honor Roll**

**Sport**



1. Construct a two-way table summarizing the data.

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1. What percent of total students play a sport?
2. What percent of students that play a sport are not on the honor roll?
3. What percent of students that are on the honor roll also play a sport?

The data from a survey of 25 students are shown in the Venn diagram. The students were asked whether or not they do or do not do chores at home and whether they receive an allowance or not.

**Allowance**

**Chores**



1. Construct a two-way table summarizing the table.

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1. What percent of students that do not receive an allowance also do not do chores?