**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_ Score:\_\_\_\_\_**

**U7 HW #3** *Two-Way Frequency Tables*

1. In Miss Marble’s music collection there are…

* 208 songs in total
* She has 150 songs in her “Workout Music” playlist
* 162 of the songs in the total music collection are Pop songs
* 38 Classical songs are in her “Music for Studying” playlist

1. Complete the table for about the Miss Marble’s music collection.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Workout Music** | **Music for Studying** | **Totals** |
| **Classical** |  |  |  |
| **Pop** |  |  |  |
| **Totals** |  |  |  |

1. How many total songs are in her “Music for Studying” playlist?
2. How many classical songs are in her “Workout Music” playlist?
3. What percentage **of songs in the collection** are pop?
4. What percentage **of songs in the collection** are for studying?
5. What percentage **of the classical music** is music for studying?
6. What percentage **of songs in the collection** are classical music for studying?
7. Laura was driving home from school and texting her mom at the same time. She did not notice that she was speeding and a police officer pulled her over and gave her a traffic citation. She wonders if there is an association between people who regularly text while driving and if they have received a traffic citation in the last 2 years. She conducts a survey among 50 drivers and records some data in the table below.
8. Fill in the missing information in the frequency table below.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Regularly Texts While Driving** | **Never Texts While Driving** | **Totals** |
| **No traffic citations** |  |  |  |
| **Has received a traffic citation in the last two years.** | 18 | 5 |  |
| **Totals** | 25 |  | 50 |

1. How people regularly text while driving?
2. How many people have no traffic citations and regularly text while driving?
3. Paul tosses a dice and spins a coin 150 times as part of an experiment. He records 71 heads and a six 21 times. On 68 occasions, he gets neither a head nor a six. Complete the table.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Six** | **Not a Six** | **Totals** |
| **Head** |  |  |  |
| **Tail** |  |  |  |
| **Totals** |  |  |  |

1. How many times did he toss a tails and a six?
2. How many times did he toss a heads?
3. **Modes of Transportation:** Recall the data gathered from Brookside High School about modes of transportation and gender*.* Use **numerical evidence** from the table to answer the questions below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Walk** | **Car** | **Bus** | **Cycle** | **Total** |
| **Male** | 34 | 28 | 15 | 52 | 129 |
| **Female** | 46 | 17 | 12 | 17 | 92 |
| **Total** | 80 | 45 | 27 | 69 | 221 |

**Directions:** Answer the following questions about the data collected:

1. What relative frequency **of students surveyed** take the bus to school?
2. What relative frequency **of students surveyed** are males who walk to school?
3. Based off of the table above what is the most popular mode of transportation for the sample population.
4. What is the preferred method of transportation for females? Use numerical evidence to support your answer.
5. What is the preferred method of transportation for males? Use numerical evidence to support your answer.
6. Is taking the bus more common with males or females?
7. **Music:** Use the two-way frequency table given below about Miss Marbles’ music playlists to answer the following questions.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Workout Music** | **Music for Studying** | **Totals** |
| **Classical** | 8 | 38 | 46 |
| **Pop** | 142 | 20 | 162 |
| **Totals** | 150 | 58 | 208 |

1. Is there an association between what Miss Marble is doing (exercising or studying) and what she is listening to? **Use numerical evidence to support your answer**.