Traveling to School

**Part A: Class Survey (Intended for Elementary, Middle, and High School)**

Survey your classmates to learn their primary form of transportation to school. Complete the table below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Transportation** | **Tallies** | **Frequency** | **Fractional Part of the Class** | **Percentage of the Class** |
| **Bus** |  |  |  |  |
| **Car** |  |  |  |  |
| **Walk** |  |  |  |  |
| **Bike** |  |  |  |  |
| **Other** |  |  |  |  |

Display the data in your last column using another representation.

**Part B:**

**Simulation (Intended for Middle/High School)**

1. Decide with your group which color on the spinner represents the mode of transportation.

Red: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Blue: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Yellow: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Green: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Orange: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. With your group, determine how you can use the spinner to simulate surveying your classmates. Describe your process, and explain why it works.
2. Complete the table below using your simulation data.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Transportation** | **Tallies** | **Frequency** | **Fractional Part of the Class** | **Percentage of the Class** |
| **Bus** |  |  |  |  |
| **Car** |  |  |  |  |
| **Walk** |  |  |  |  |
| **Bike** |  |  |  |  |
| **Other** |  |  |  |  |

1. Using the spinner provided, complete the simulation to complete the table and answer the questions.
	1. How does the estimated number of students who ride the bus vary from the actual population?
	2. How does the estimated number of students who ride the bus vary from the actual population?
	3. If you have 300 students in the population, how would the estimate of the number of students who ride the bus compare to the population?
2. If you and your group were designing a simulation to model this situation, how would you do it? How do you know it would work?