

CHAPTER
2 **Project Recording Sheet**
Introduction to Algebra

Traffic engineers use mathematics and computers to program the lights at intersections so traffic moves as smoothly as possible. One way to compare vehicles moving in different directions is to see how many pass in a given period of time such as a minute. We can write this mathematically as:

$$\text{vehicles per minute} \cdot \text{total minutes} = \text{total vehicles}$$

Use the information above to write equations and complete the table below:

Street	Total Vehicles	Time (Minutes)	Equation	Vehicles/Minute
West Spain	120	60		
Second Street East	30	3		
Fifth Street West	60	20		
Broadway	180	45		
MacArthur	100			5

Answer the following questions using the table above.

- Which is the busiest street? _____
- Which is the quietest street? _____
- Which street(s) have less than four vehicles per minute? _____
- How long (on the average) would you have to wait on Fifth Street West for six vehicles to come by? _____
- How does the wait on Fifth Street West for six vehicles compare to the wait on Second Street East? _____
- If you counted from eight in the morning to five at night, about how many vehicles would you expect to see on Broadway? _____
- There are five more cars per minute on State Street than on Second Street East. Write an equation to find the number of vehicles on State Street. _____

Extension: What things determine the average number of vehicles on a street? _____