

Name:

Date:

AI Traffic Light System

Imagine you are an AI controlling a traffic light at a busy intersection. Your goal is to minimize waiting time for all vehicles.

Count the number of vehicles passing through the intersection in 5-minute intervals during peak and non-peak hours. Use the table below to record your data.

Time Interval	Number of Vehicles (Peak Hour)	Number of Vehicles (Non-Peak Hour)
0-5 minutes		
5-10 minutes		
10-15 minutes		
15-20 minutes		

Analysis:

Calculate the average number of vehicles passing through the intersection during peak and non-peak hours. Based on the data, determine the optimal green light duration for peak and non-peak hours. Fill in the blanks:

- During peak hours, the green light should be on for _____ seconds.
- During non-peak hours, the green light should be on for _____ seconds.

Reflection:

How did the data help you decide the timing for the traffic lights?

What are the benefits of using AI to control traffic lights?
