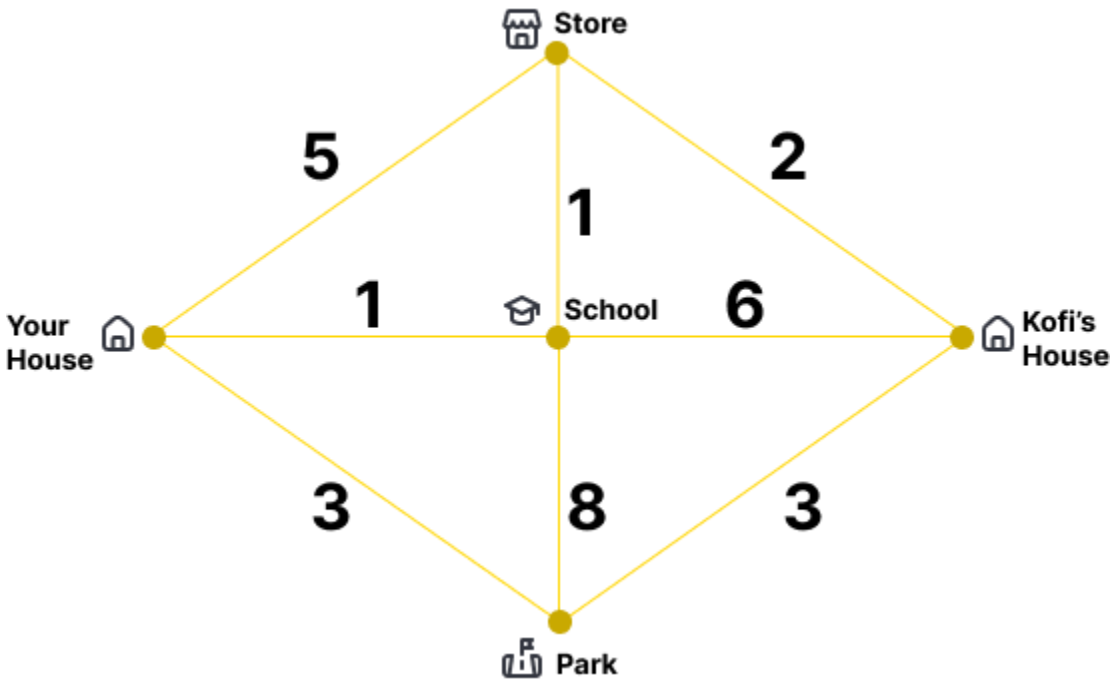
Dijkstra's Activity

Welcome to Kofi Town, where you will embark on a “quick” journey through each possible destination .

- **Path**: A way or route between two points on a map.
- **Shortest Path:** The path between two points that requires the least distance traveled or the minimum time.
- **Algorithm:** A set of instructions or rules designed to perform a specific task or solve a problem.
- **Dijkstra's Algorithm:** A famous algorithm used to find the shortest path between points in a graph, where points are places and lines (edges) represent the route or distance between these places.



Question 1: What is the shortest path to get from your house to Kofi’s House?

What is the total value of the path?

Question 2: You and Kofi just finished some homework at his house and want to get on the swings at the park;what is the shortest path?

What is the total value?

Question 3: You are home and you have to get some snacks from the store for your break time. What is the shortest path?

What is the total value of the path?

Question 4: You are at school and it has just ended for the day, YAAAAAY!, and you are going to play games with Kofi at his house, but you need to get some snacks. What is the shortest path to Kofi's House when you need to get snacks?

What is the total value?

Question 5: You just grabbed a snack from the store and want to head over to the park. How many shortest paths are there?

What are those paths? What is the total value of the path(s)?

Question 6: What would be the total value of the path if you wanted to go from Kofi's house to your house, but you needed to go through the park and the school?

Is this the shortest path from Kofi's house to your house ?

If your answer is now, explain why .