## Heuristics Day 0 Preclass

## Expected time to complete: less than 20 minutes

The goal of this pre-class is to (1) introduce/refresh understanding of commonly used path finding algorithms (Dijakstra's Algorithm and A\*)

We provide some useful resources below, but if you are comfortable with these algorithms, feel free to just complete the activity.

- Dijkstra video walkthrough
- A\* walkthrough

This pre-class is graded for completion, not correctness.

- 1. Write short definitions for the following common Heuristics used in A\*
  - a. Euclidean Distance
  - b. Manhattan Distance
- 2. For the following graph, use both (a) Dijkstra's algorithm AND (b) A\* to find the shortest path from node a to node z. You should write down the steps you are going through.

**Note**: The heuristic value (used in A\*) for each node is provided in orange below each node. This is the euclidean distance between that node and node z.

