For part 3 I prioritised success rate, then shorter path length, then time.

In part 3 my agent does the following

- Find the board dimensions.

- Find the locations of oracles & charging stations

- While multiple possible identities:

- Find the two oracles which are closest by euclidean distance (pruning)

- Find paths to locations adjacent to both of these.

- Follow shortest path.

- Update possible identities (outputs clue & remaining suspects)

- Find shortest path to a charging station.

- Go to charge station & charge.

- Output result

Notes

- When finding paths if it encounters a path of length >50 then it stops looking for a path to that point, this does mean some valid paths are not found but I believe this is a reasonable limit as it is a bit longer than the length of the main diagonal. (I didnt account for different board sizes heres)

- The number above the agent is the length of the current path it is considering

- The agent always goes to a charging station after an oracle (even if it has discovered the identity)

(allowed) Causes of failure:

- Both charging stations are unreachable in under 50 moves.

- Both of the two closest unused oracles are unreachable in under 50 moves (for all their adjacent spaces)

There is no part 4