

**Changed A\* and Heuristic:**

**Main Changes:** If the (diagonal)distance from Cur-to-End is greater than Start-to-End, don't include.

**Final Run:**

PathCost: 806.7765611418041    Uncovered: 44972    TimeTaken: 9738

**Test Runs:****First Run:**

PathCost: 810.0350449506955

Uncovered: 48655

TimeTaken: 11444

**Second Run:**

PathCost: 807.94883681065

Uncovered: 46045

TimeTaken: 11091

Changes: If the distance from Current to End is any bigger than Start to End, ignore it, as we don't want to be going AWAY from the end if at all possible

**Third Run:**

PathCost: 806.7765611418041    Uncovered: 44972    TimeTaken: 9738

Changes: Full disclaimer, I made a mistake but it reduced the cost. Putting in a check to make sure the cost of moving is greater than zero, if so don't add it to the costs mapping (cost to node). HOWEVER it still added it to the g(n) cost map, the parents map, and the frontier, but now it has a null value in the total-cost-of-the-node map...

**Note:** The implemented algorithm is a continuation of the AStarExp\_UNOPTIMAL algorithm, as that one performed better as it came to time and nodes. It was just not 100% optimal before.