

HELP! WE'RE LOST!

Background

In the 1960s, Proctor & Gamble held a competition where participants had to find the shortest possible route they could through 33 cities in the continental United States (right), visiting each city **exactly once**, starting and ending in Chicago. This is a classic example of the Travelling Salesman Problem (TSP), a famous combinatorial optimization problem. Back in the 1960s, a problem of size 33 was indeed a challenge due to the current state of computation and algorithms. However, participants would often come up with very high quality solutions by hand.



Question

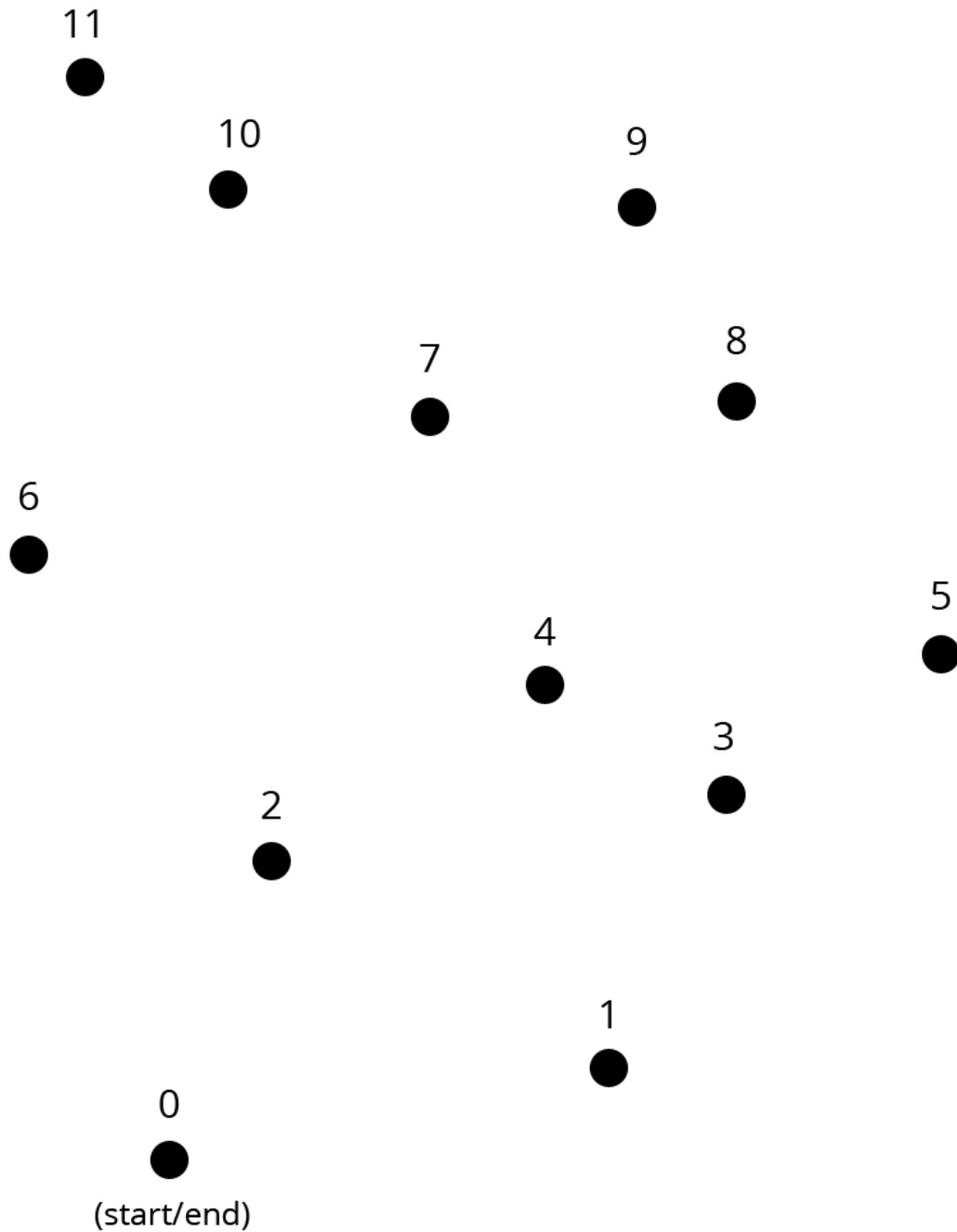
We are going to (sort of) pay homage to the manual computation of the past. You must solve the 12-city TSP on the **next page**. Find a path visiting each node exactly once. The optimal solution is best, but even short paths well help out your ranking! There are no restrictions on how you solve it. **OH! One more thing.** Node 8 must be visited sometime before node 10, and node 9 sometime before node 3. Good luck!

Solution Requirements

Provide an order of nodes starting **and** ending at node 0. All pairwise distances used to find a solution **must be rounded to the nearest integer in centimeters**.

Example Submission Format (5 cities, include commas in .txt file): 0, 5, 1, 2, 3, 4, 0

Should you need more clarification, The Travelling Salesman Problem is defined here: https://en.wikipedia.org/wiki/Travelling_salesman_problem



Remember! Round pairwise distances, center to center, to the nearest centimeter. Also, node 8 must be visited sometime before node 10, and node 9 sometime before node 3.