

Exercise 4: Manhattan distance

- Imagine placing the numbers 1 to n in different positions in an $n \times n$ grid such that the Manhattan distance between any two numbers i and j is greater than the maximum of the two numbers minus 1. The aim is to minimize the total of the Manhattan distances between the pairs.

Exercise 5: Zoo, Buses and Kids

- 300 kids need to travel to the London zoo. The school may rent 40 seats and 30 seats buses for 500 and 400 £.
- How many buses of each to minimize cost?