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1) Travelling Salesman Problem

The travelling salesman problem is an algorithmic problem that involves determining the shortest path between a number of necessary stops. The cities a salesperson might visit are the points in the problem description. The salesman wants to travel as little as possible, both in terms of distance and travel expenses.

2) Chinese Postman Problem

This problem involves determining the quickest route that starts and ends at the same location to travel every street in a neighbourhood. This implies that the most optimal path may require you to travel some streets more than once. It is applied in a variety of real-world circumstances, such as optimizing delivery or maintenance routes.

3) Towers of Hanoi Problem

It is a three-rod puzzle with variously sized disks. The complete stack of disks needs to be moved from one rod to another, but you can only move one disk at a time, and a large disk cannot be placed on top of a smaller one. It is similar to a game that teaches you how to solve puzzles and problems by utilizing recursion.

4) Missionaries and Cannibals Problem

You have a boat that can carry two people at a time, three missionaries, and three cannibals on one side of a river. You have to get them all across without ever having more missionaries than cannibals on either side, or else the missionaries will be eaten by the cannibals. Finding a way to do this while abiding by the regulations is a difficult task.

5) Eight Queens Problem

This problem is like a chess puzzle. Eight queens must be placed on an 8x8 chessboard so that they cannot attack one another. As a result, there cannot be more than one queen in a single row, column or diagonal. Finding an appropriate solution for every queen is a difficult task.

6) Monkey and Banana Problem

It is a puzzle where a monkey needs to figure out how to reach a bunch of bananas hanging from the ceiling. It can get to the bananas using a chair, but it can only carry one object at once. The solution to the problem must be found so that the monkey can successfully obtain the bananas.

7) The Konigsberg bridge Problem

This involves a city with many bridges and islands. People wanted to find a way to cross each bridge once and return to their starting point. Because of the way the bridges were connected, mathematician Euler discovered that it was not possible. This problem led to the development of the new mathematical field known as graph theory.