

### Robot Movement Design Supp. 1

Consider a simple robot that can move forward, turn at any specified angle, and beep.

We want to design an algorithm to solve the problem:

Make the robot walk in a square one meter on a side, and beep when it reaches the second and fourth corners of the square. The robot should do this ten times.

Assume initially the robot is at point A (diagram) and facing east (right):

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### Shortest Path Design Supp. 2

You've moved to a new town and you live at S (map below). Your favorite restaurant is at Z. You use the local bus service to travel, and there is a separate fare to go from each corner to the next.

Problem: how can you determine the cheapest path from S to Z?

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### Shortest Path Continued Design Supp. 3

Problem: how can you determine the cheapest path from S to Z?

Here are the fares:

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### Shortest Path Found Design Supp. 4

Here's the cheapest path:

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