



A-Maze-ing Mazes

Welcome to Algorithopoly!

Greetings from the sunniest, summer-like planet in the galaxy, Algorithopoly. Here, Ansel will teach you all about algorithms and how they can be used to perform tasks!

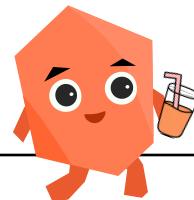
What is an Algorithm?

An **algorithm** is a **set of instructions used to perform a task**.

We use algorithms in computer science to tell computers how to accomplish a specific task, whether it be generating random numbers or calculating the sum of a list.

Algorithms can also be applied to everyday tasks like making a PB&J sandwich or baking cookies.

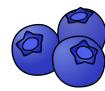
Let's take a look at how Ansel uses an algorithm in the morning to make a his fruit smoothie for breakfast!



Ansel's Fruit Smoothie Algorithm

START

1. Add 2 frozen bananas
2. Add 1 cup of blueberries
3. Add 1 cup of water
4. Blend for 30 seconds
5. Pour into a cup and enjoy!



DONE!

The **order** of an algorithm is important to keep in mind!
(Would you use the blender before adding the fruit?)



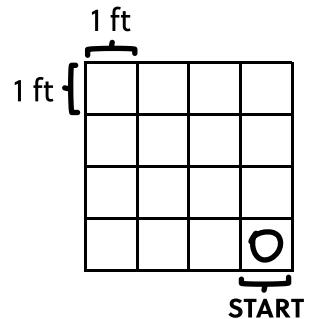
ALGORITHOPOLY

Mission 1

Maze Craze!

Setup

- Using masking tape, make a 4 by 4 grid on the floor, with each square being 1 foot long.
- With another piece of tape, mark the bottom right square with an "O". This will be the starting point for your maze!
- Mark one square on your grid to be the finish point with an "X" on your Maze Map below. (Don't show your friend which square you picked!)



Directions

- Using the commands "move up", "move down", "move right", and "move left", write a step-by-step algorithm to travel from the starting mark your finish mark. Use up to 10 steps from the Maze Bank.
- Read your algorithm to your friend while they perform the steps. If they end up at the correct square, you both win!

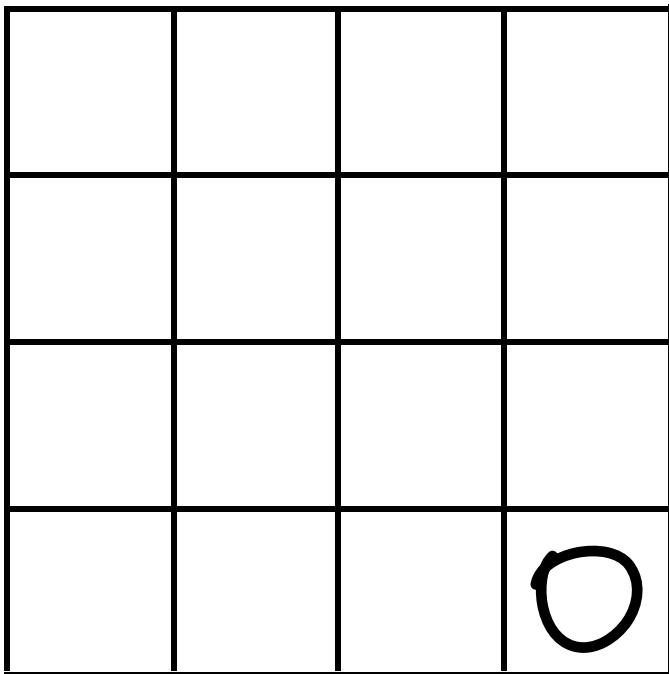
Example: Ansel invited his friend Lex to walk the maze!

Ansel's Maze Algorithm

1. Move left
2. Move up
3. Move up
4. Move left
5. Move up



My Maze Map



Maze Bank

- ↑ Move up
- ↓ Move down
- ← Move left
- Move right

My Maze Algorithm

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____