

A-Maze-ing Mazes

Off to Algorithmopoly!

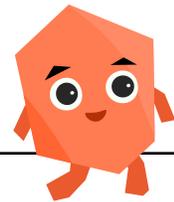
Welcome to Algorithmopoly: the sunniest, summer-like planet in our galaxy. Ansel is excited to teach you all about algorithms and how we can use them to perform tasks!

What is an Algorithm?

An **algorithm** is a **set of instructions that we use to perform a task**.

We use algorithms in computer science to give computers instructions on completing certain tasks like searching up a definition or playing a video. Similarly, we use algorithms to perform 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 his delicious fruit smoothie for breakfast!



Ansel's Favorite 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!

END

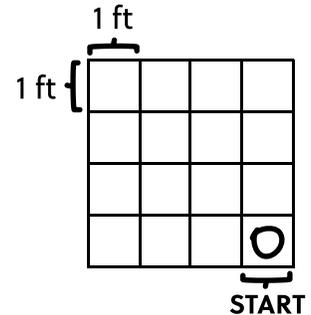


The **order** of an algorithm is important to keep in mind!
(Would you use the blender before adding the fruit?)

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!
- Using a pencil, mark one square as the finish point with an "X" on your 'My Maze Map' grid on the next page. (Don't show your friend which square you picked!)



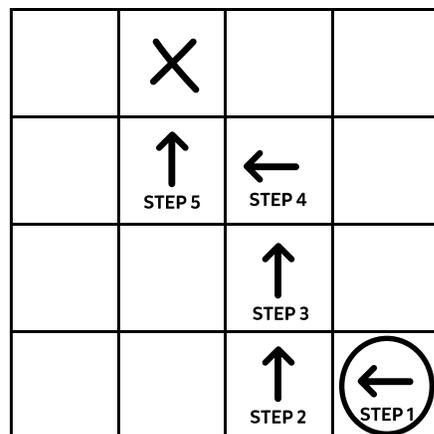
Directions

- Using the actions "move up", "move down", "move right", and "move left", write a step-by-step algorithm (up to ten steps) on your 'My Maze Algorithm' on the next page to travel from the starting mark "O" to your finish mark "X"
- 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 best friend Lex to walk the maze!

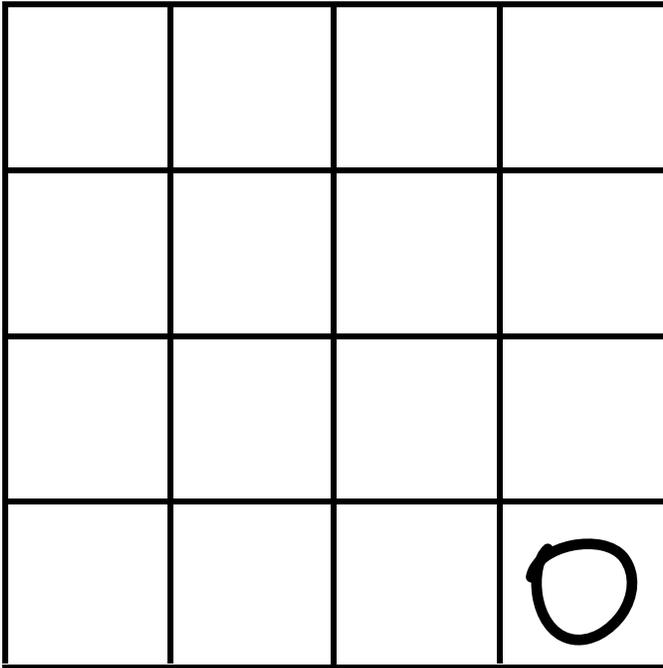
Now, move left!



Ansel's Maze Algorithm

- Move left
- Move up
- Move up
- Move left
- Move up

My Maze Map



Actions

↑ Move up

↓ Move down

← Move left

→ Move right

My Maze Algorithm

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____