

# Karel Project #9

12345

You can use numbers for **inspiration** when building mazes.

Go to the **Creative Suite**, open a new Karel project, and save it in the folder **course-karel-projects/** as **12345**.

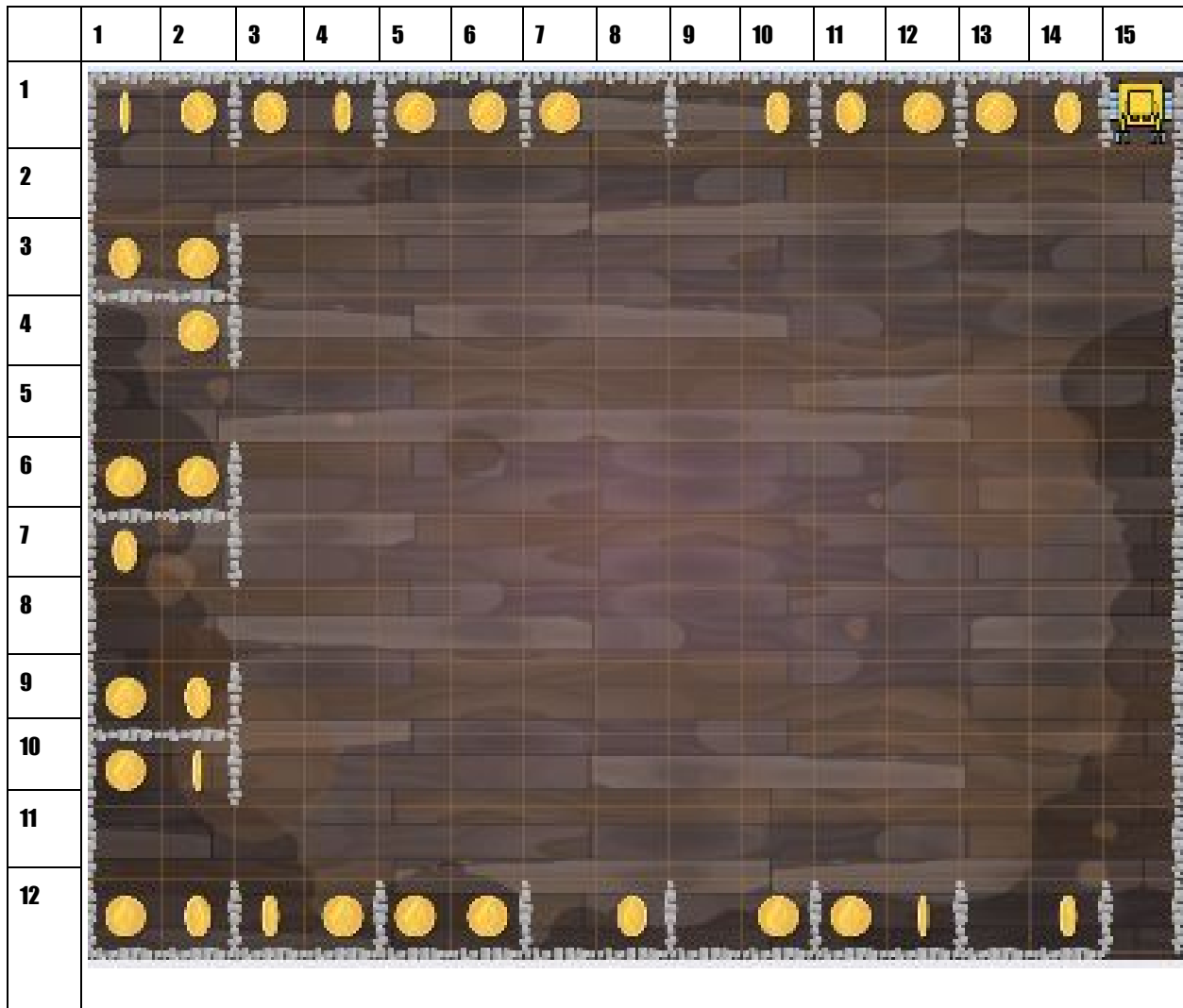
## Goal: Create a Grid-Based Design

To create a maze that is **based on a grid**, you will:

1. Create a **grid-based design** for your maze.
2. Add **Walls** and **Objects** to make your maze **fun**.

# Numbers

Every maze uses a few numbers.



Can you see how the **numbers line up** with the squares in this Karel maze?

## Step 1: Create a Grid-based Design

Standard NCLab **Karel mazes** are 12 squares tall & 15 squares wide. These two numbers are **useful numbers** for **Karel mazes**. To explore the special qualities of these numbers you can make a maze that uses **every other square** in a **Karel maze**.

1. Place an Obstacle on the **left side** of your maze.



2. Then place an obstacle on the **right side**.



3. Place an obstacle in **every other square** on the edge of the maze.



If you have **Obstacles** in the lower-left and lower-right corners you are doing great. This is a very useful **template** for a new maze.

To complete your maze, start adding **Walls** and **Obstacles**, here are a few possibilities:



Tips:

- Use graph paper to plan your maze.
- What challenges can you make if you require **gpsx** or **gpsy** commands in your **Goals**?

## Project Checklist

Your project will be finished when:

1. Your game named **12345** is saved in the folder **course-karel-projects/**.
2. Your maze is built using **every other square along the edges of the maze**.

**Any shape can be expressed with numbers.**