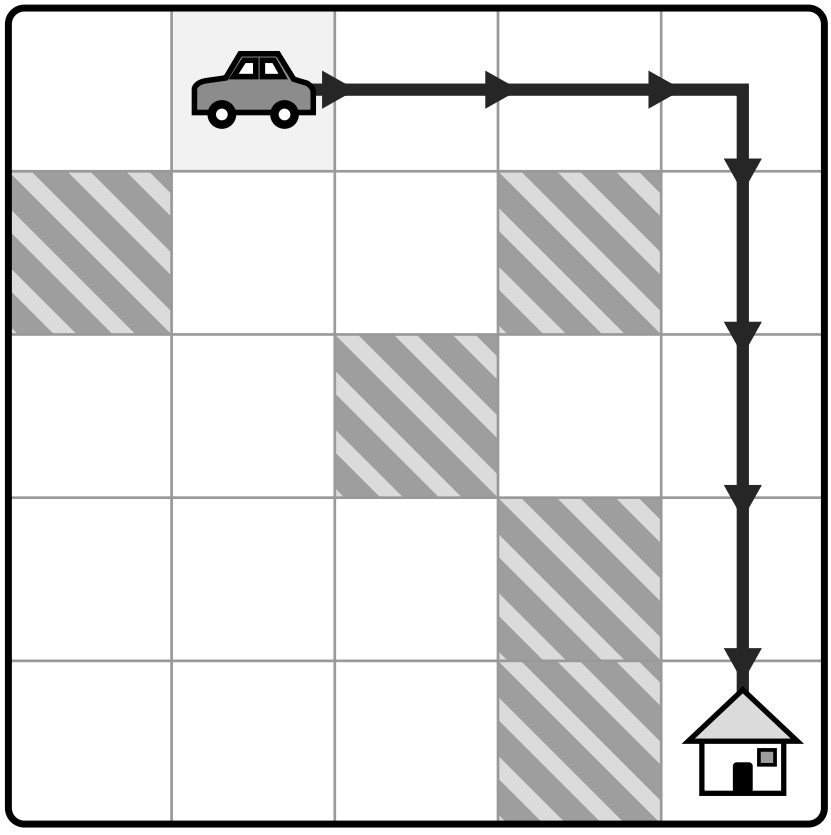
SCREEN-FREE CODING WORKBOOK • AGES 5-7

The Big Book of Unplugged Coding

120 Screen-Free Coding Puzzles for Kids Ages 5-7: Sequences, Debugging, Loops and More, with Answer Key



Harper Lane

Sample pages

The Big Book of Unplugged Coding

120 Screen-Free Coding Puzzles for Kids Ages 5-7: Sequences, Debugging, Loops and More, with Answer Key

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All 120 puzzles in this book are original and were checked by a computer program: every code was walked square by square, every "write the code" puzzle has exactly one code that fits its boxes, and every "fix the bug" puzzle has exactly one wrong arrow.

Screen-free means no computer, tablet or phone is needed. Adult supervision is recommended for young children using pencils and scissors.

First edition, 2026



This Coding Book Belongs To

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Sample pages

A Note for Grown-Ups

You do not need to know anything about computers to use this book. Every page is a small coding puzzle that your child solves with a pencil. The car does exactly what the arrows say, no more and no less. That is how real computers work, and it is the first big idea of coding.

What your child practices

- **Reading a code:** following steps in order, one at a time, like a computer does.
- **Writing an algorithm:** planning the steps that reach a goal.
- **Debugging:** finding the one step that is wrong and fixing it.
- **Completing a sequence:** working out which steps are missing.
- **Breaking a problem into parts:** one pick-up at a time, in order.
- **Counting steps:** writing a long code in a short way with numbers.
- **Loops:** spotting a pattern of steps and repeating it.
- **Finding the best solution:** comparing ways and choosing the shortest.
- **Spatial thinking:** left and right, mirror images and quarter turns.

How to help

- Go in order. Each chapter starts with a page that shows one new idea and a worked example. The puzzles in each chapter get a little harder as you go, and the stars on each page show how hard it is (1 to 3).
- Let your child put a finger, a coin or a small toy on the car and move it one square for each arrow. Saying the arrows out loud ("up, up, right") helps a lot.
- Read the instructions aloud for early readers. The words are short on purpose.
- Mistakes are part of coding. When a code goes wrong, ask "Where did the car go wrong?" Finding that spot is called debugging, and real coders do it every day.
- The answers start on page 138. Each answer shows the path on the map and the code. A computer checked every puzzle: each "write the code" page has exactly one code that fits its boxes, and each "fix the bug" page has exactly one wrong arrow.

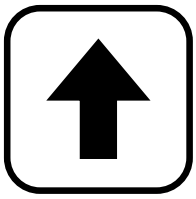
Take it off the page

Make a big grid on the floor with tape or chalk, or use the squares of a tiled floor. One person is the robot and the other writes the code with arrows on paper. Then swap! Kids love being the computer that follows the code exactly.

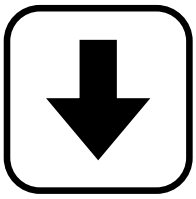
Sample pages

Meet the Arrows

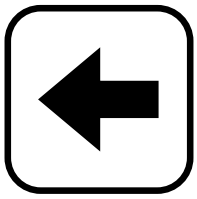
A **code** is a list of arrows. The car reads the arrows in order and moves **one square** for each arrow.



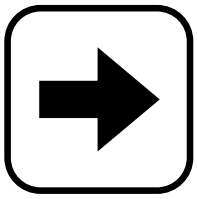
up



down



left

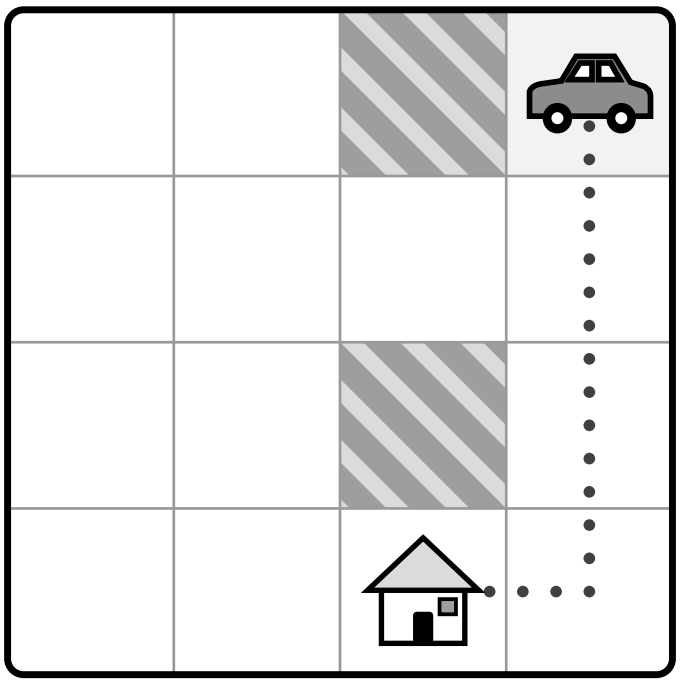


right

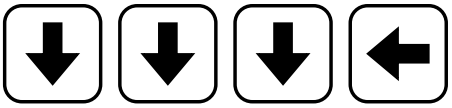
Car rules

1. One arrow moves the car **one square**.
2. The car cannot go through roadblocks.
3. The car cannot leave the board.

Try it:



Put your finger on the car. Follow the dots with this code:

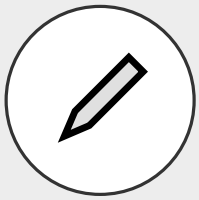


4 arrows, 4 squares, and the car is at the house. You just ran your first code!

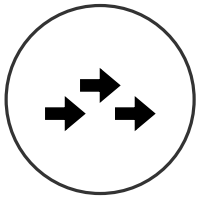
Sample pages

Coding Words

Real coders use these words. Now you can too!



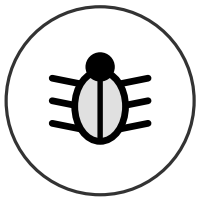
Code
A list of steps for a computer (or a car) to follow.



Sequence
Steps done in order, one after another. The order matters!



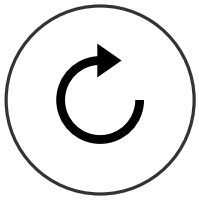
Algorithm
A plan of steps that solves a problem, like getting to the house.



Bug
A mistake in a code. Even grown-up coders make bugs.



Debug
To find a bug and fix it. Coders are bug detectives!

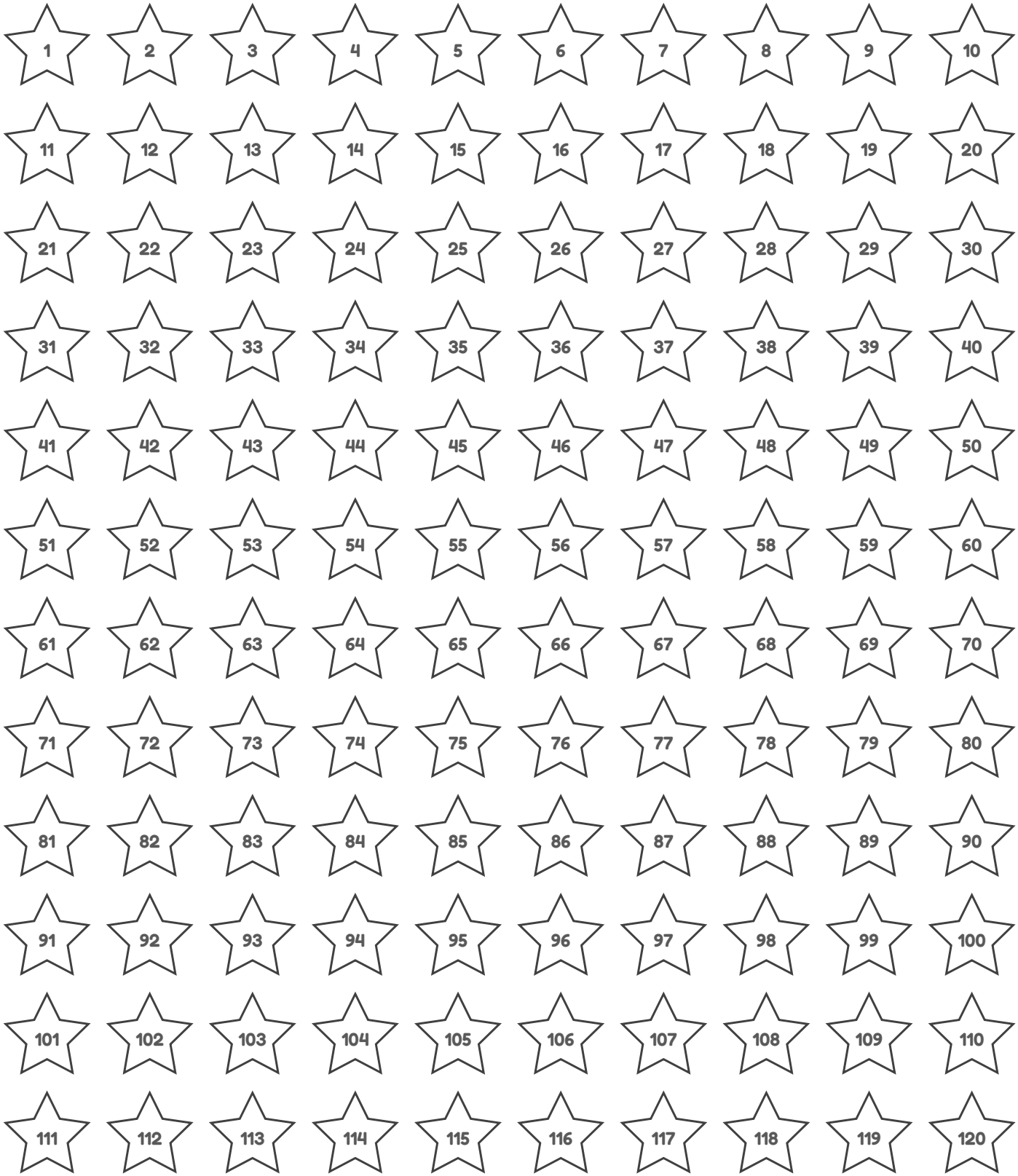


Loop
Steps that repeat. Repeat 3 times means do them 3 times.

Sample pages

My Star Chart

Color a star each time you finish a puzzle.



Sample pages

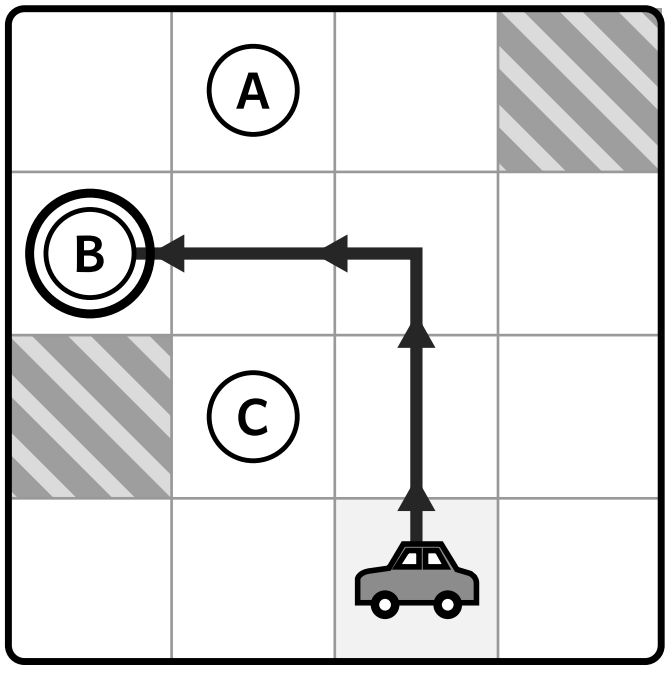
CHAPTER 1

Follow the Code

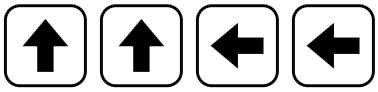
Puzzles 1 to 14

A code is a list of steps. The car does them in order, one at a time.

Let's try one together



Follow the code from the car. The path ends on letter **B**.



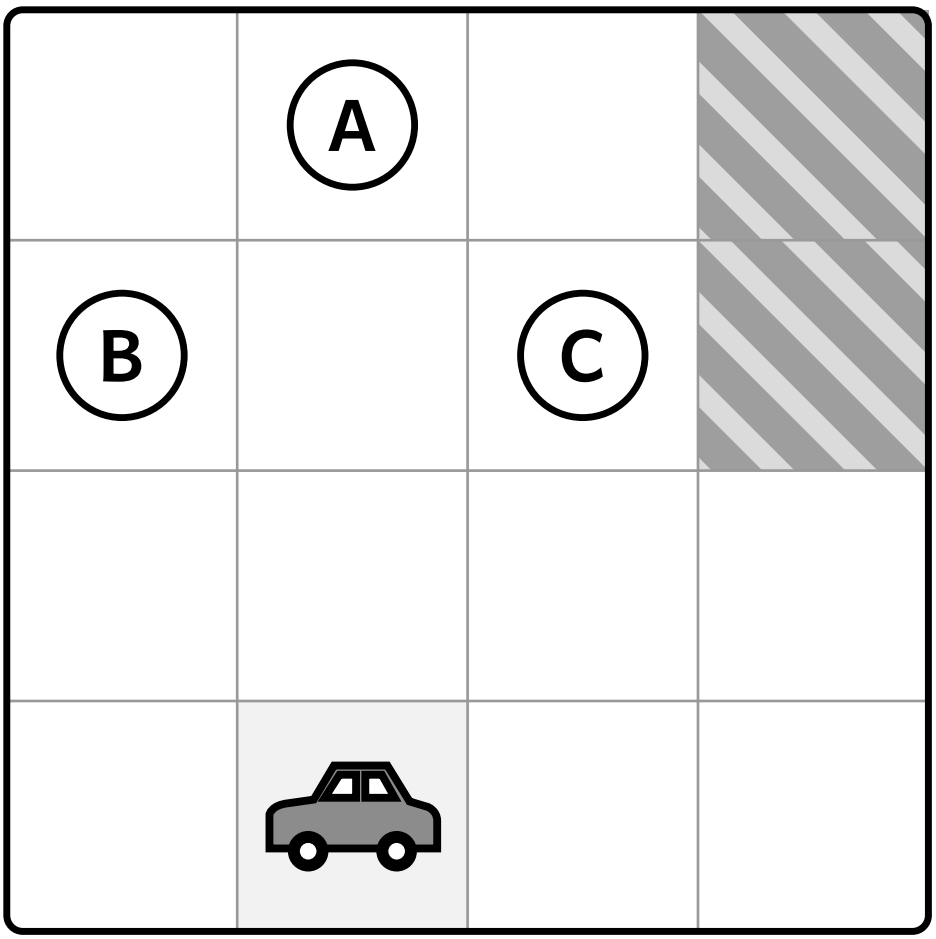
Grown-up tip: ask your child to say each arrow out loud while moving a finger. If they lose their place, the small numbers under the boxes help.

Sample pages

Follow the Code

★☆☆ **Puzzle 1**

Start at the **car**. Follow the code, one arrow at a time, and draw the path. Which **letter** does the car stop on?



Code:



1 2 3

The car stops on letter: ☐

Arrow key: ↑ up ↓ down ← left → right

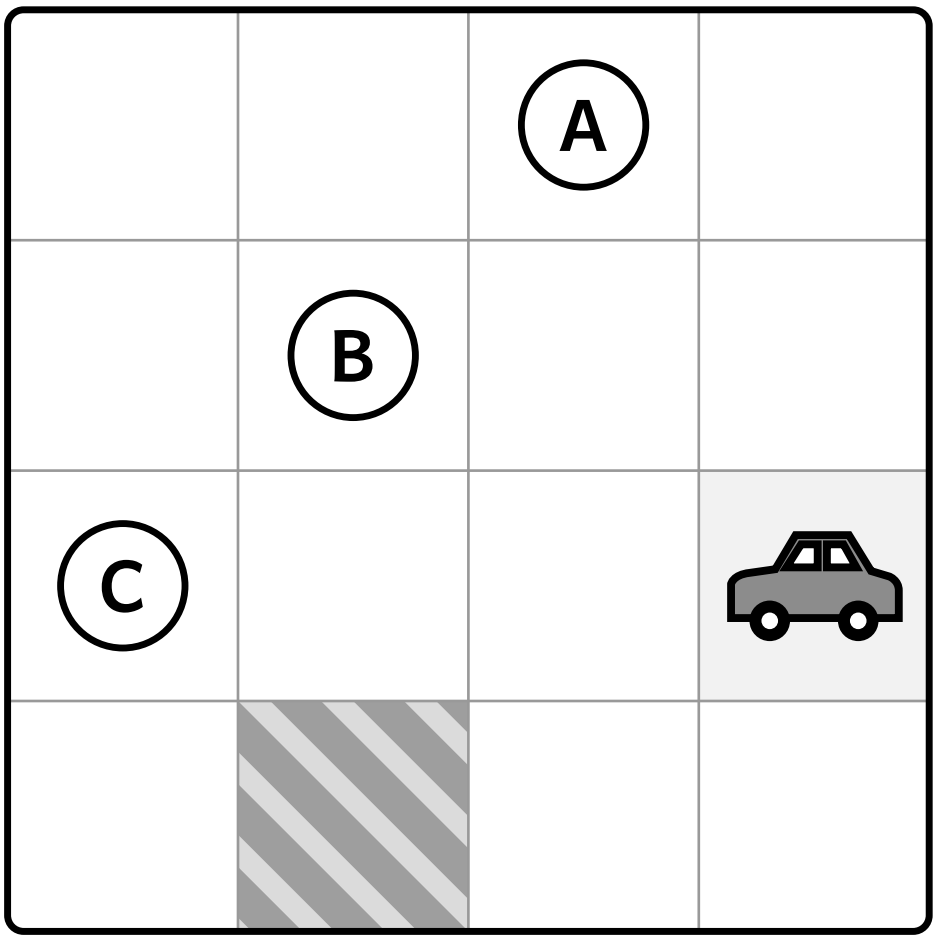
I did it! ☆

Sample pages

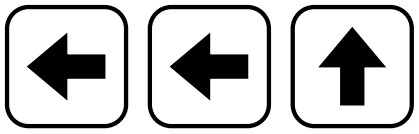
Follow the Code

★☆☆ **Puzzle 2**

Start at the **car**. Follow the code, one arrow at a time, and draw the path. Which **letter** does the car stop on?



Code:



1 2 3

The car stops on letter: ☐

Arrow key: up down left right

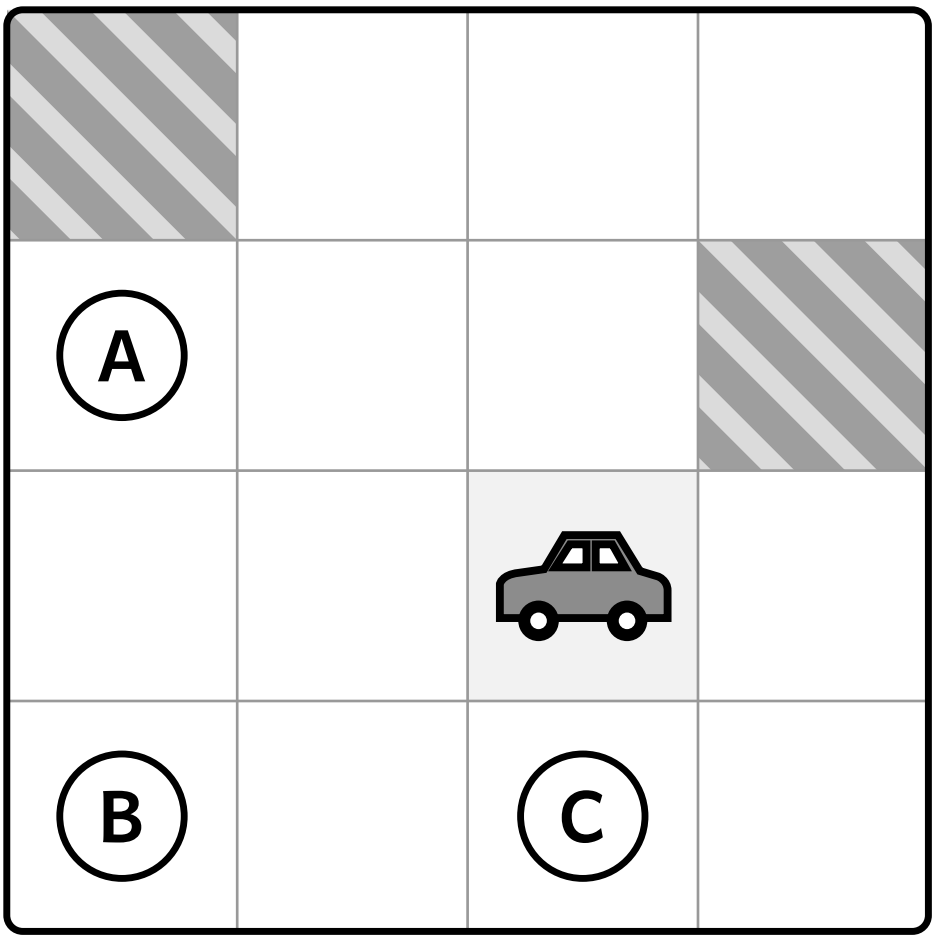
I did it! ☆

Sample pages

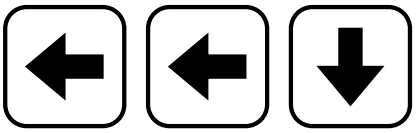
Follow the Code

★☆☆ **Puzzle 3**

Start at the **car**. Follow the code, one arrow at a time, and draw the path. Which **letter** does the car stop on?



Code:



1 2 3

The car stops on letter: ☐

Arrow key: up down left right

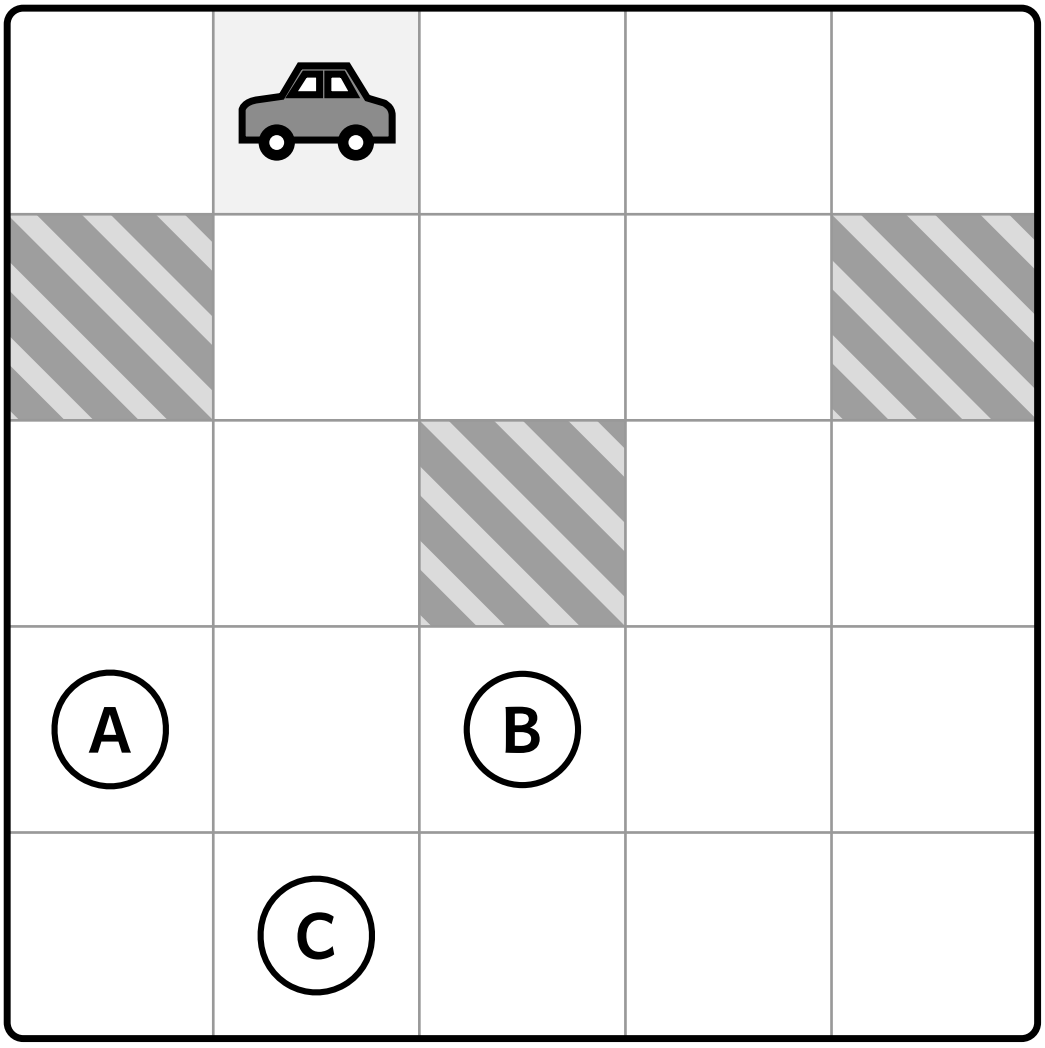
I did it! ☆

Sample pages

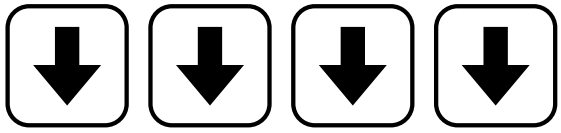
Follow the Code

★☆☆ **Puzzle 4**

Start at the **car**. Follow the code, one arrow at a time, and draw the path. Which **letter** does the car stop on?



Code:



The car stops on letter: ☐

Arrow key: ↑ up ↓ down ← left → right

I did it! ☆

Sample pages