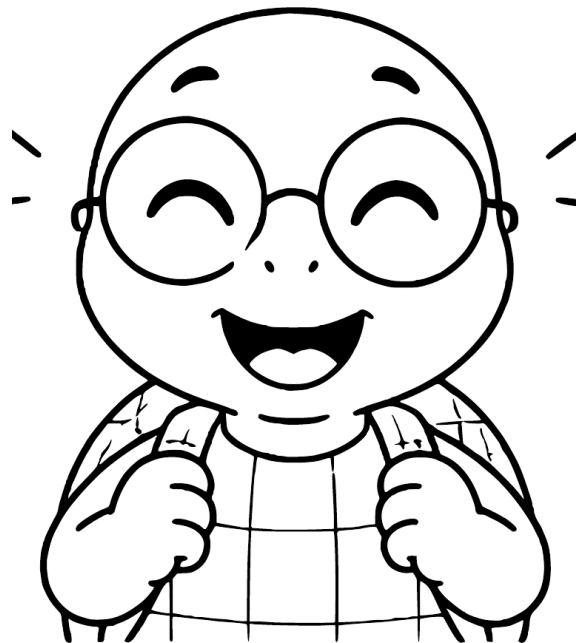


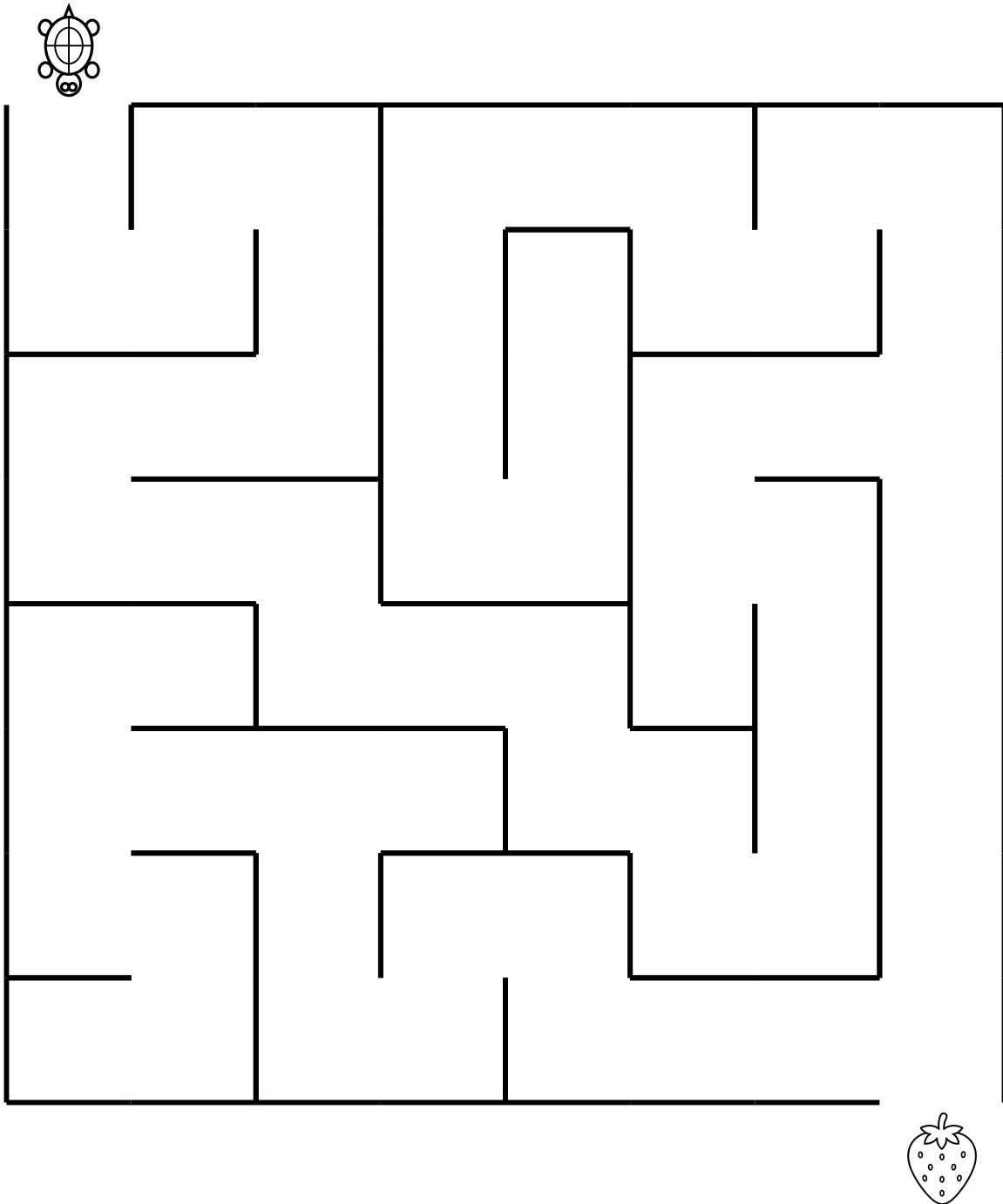
This book belongs to

Junior Coder in training!



Zeno's Garden Maze

Zeno is lost in the tall hedge maze! Help Zeno find the way from the start to the strawberry. Then count how many times Zeno turns.

**ZENO'S CODER TIP**

A maze is a search problem. Computers find the way by trying paths and remembering dead ends.

Zeno's Number Squares

Zeno is planting a 4 x 4 seed bed. Fill in 1, 2, 3 and 4. Each row, each column and each thick box must have all four numbers - no repeats!

Example - done for you:

2	4	3	1
3	1	2	4
4	2	1	3
1	3	4	2

4			
3			1
1	4	2	3
2	3	1	

	2	1	
1	3	4	2
		2	4
2		3	

1	3		4
			3
4	2	3	1
3		4	



ZENO'S CODER TIP

Computers solve puzzles like this by testing rules again and again. That is LOGIC!



Secret Pixel Picture

Zeno's flower bed is hiding a secret picture. Computers draw pictures with tiny squares called pixels. In each row, colour the squares that have a 1. Leave the 0 squares white. What picture appears?

0 1 1 0 0 1 1 0

1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1

0 1 1 1 1 1 1 0

0 0 1 1 1 1 0 0

0 0 0 1 1 0 0 0

0 0 0 0 0 0 0 0

My picture is a: _____



ZENO'S CODER TIP

Every photo on a screen is made of millions of pixels, and each one is stored as 1s and 0s.



Connect the Stars

Zeno's star map hides a secret picture in the sky. Draw a dot in each square on the star list. Join the dots in order with a ruler, and join the last dot back to the first. What picture appears?

8								
7								
6								
5								
4								
3								
2								
1								
	A	B	C	D	E	F	G	H

Star list:

- | | | | | | |
|-------|-------|-------|-------|-------|-------|
| 1. D8 | 2. E6 | 3. E3 | 4. F1 | 5. E2 | 6. C2 |
| 7. B1 | 8. C3 | 9. C6 | | | |

My picture is a: _____



ZENO'S CODER TIP

Computers draw shapes the same way: a list of points, joined in order.



Decode the Message

A message just beamed in from a faraway planet! This code moves every letter 1 step. Find each secret letter in the Code row and write the Real letter above it. What does the message say?

Real	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Code	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A

Secret: S P D L

Real:

Secret: T I J Q

Real:

Secret: C M V F

Real:

Secret: N B S T

Real:

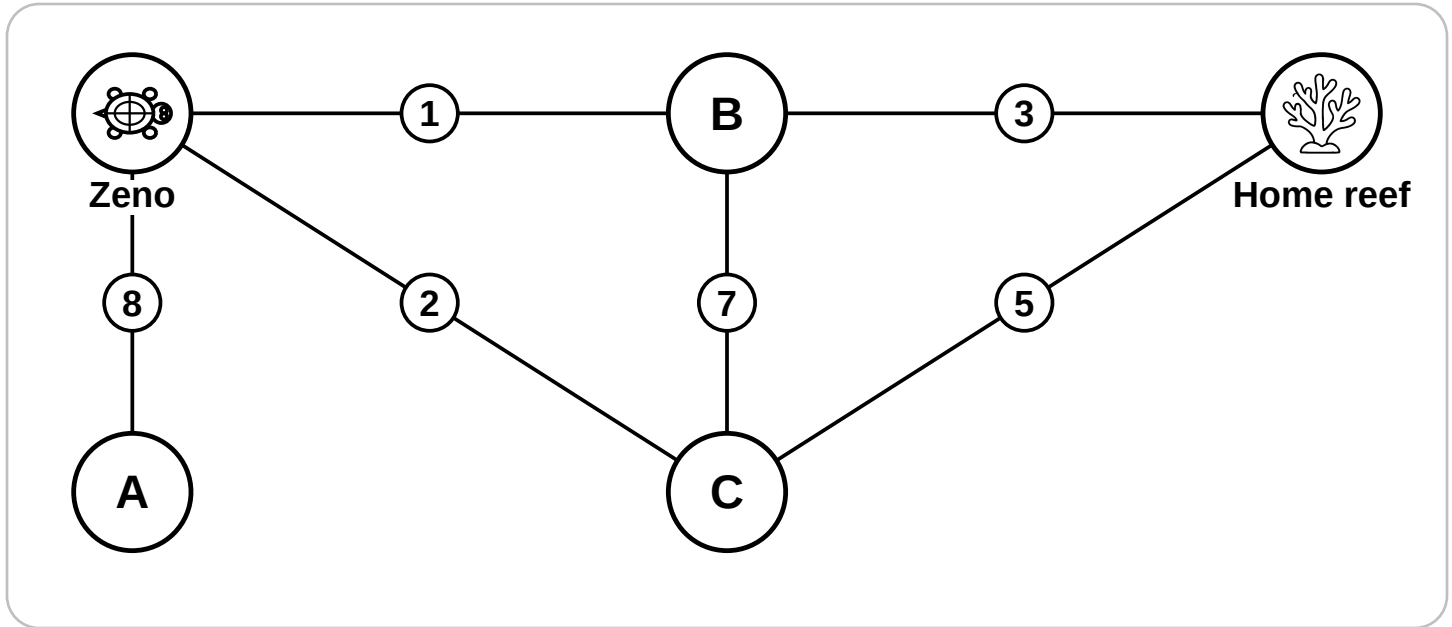


ZENO'S CODER TIP

The secret key here is the number of steps. Without the key, the message is very hard to read!

Shortest Route

Each path has a number: how many minutes it takes to swim. Add up the minutes on each way home. Find the route with the **SMALLEST** total. Trace your route with a pencil.



My route: Zeno - _____ - Home

Total minutes:

Ways I tried:

(route + minutes)

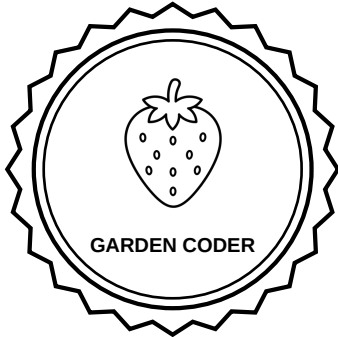


ZENO'S CODER TIP

Finding the shortest route is one of the most famous problems in computer science.

Collect All of Zeno's Adventures!

Every Zeno book has its own special chapters and its own coder badge. Tick each book you have finished. Can you collect all the badges?

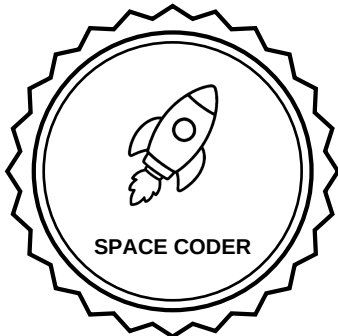


Book 1: Garden Adventure

Special chapters: Number Squares (logic) and Binary Numbers with secret pixel pictures.

☐

I finished this book and earned the badge!

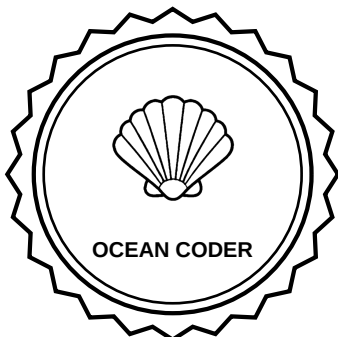


Book 2: Space Adventure

Special chapters: Star Maps (coordinates) and Secret Alien Codes (encryption).

☐

I finished this book and earned the badge!



Book 3: Ocean Adventure

Special chapters: Sorting the sea creatures and Reef Routes (shortest paths).

☐

I finished this book and earned the badge!



ZENO'S CODER TIP

Coders keep learning new ideas, one adventure at a time!