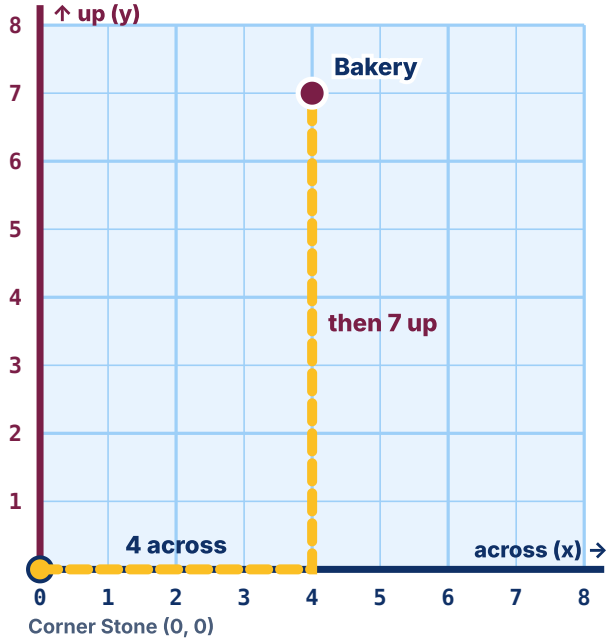
Town Planner's Field Sheet

Gridhaven · Mission 1: The Lost Map

Patterns and Proofs

The flood washed away Gridhaven's map, but Mr Ravi's notebook survived. Every landmark has an **address**: two numbers in brackets. Here is how to read one.



The Bakery is at (4, 7)

1. Start at the **Corner Stone**, (0, 0). Streets are counted from **0**, not 1.
2. The **first number** says how far to go **across**: 4 streets.
3. The **second number** says how far to go **up**: 7 streets.

Memory trick: walk along the hall **before** you climb the stairs. Across first, then up.

Three mistakes Leo the trainee keeps making

Swapping the numbers.
(1, 8) means 1 across, then 8 up. Leo went 8 across, then 1 up, and landed somewhere else entirely.

Counting from 1.
The Corner Stone is street 0. Leo started counting at 1, so he stopped one street short each way.

Forgetting the zero.
(7, 0) means 7 across and **no** steps up, so it sits right on the bottom street, the **x-axis**. (0, 9) sits on the **y-axis**.

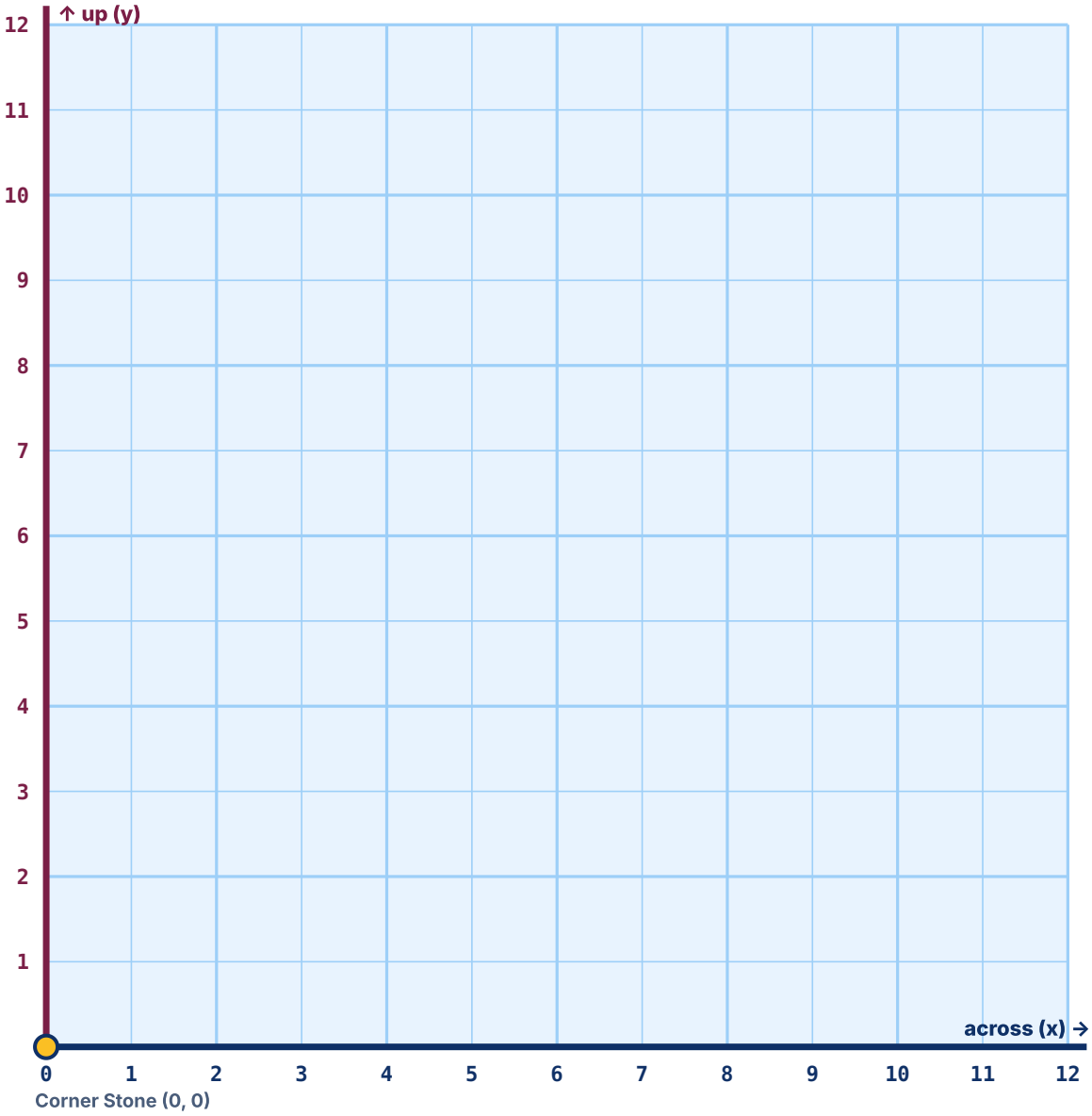
The planner's words

The two numbers are called **coordinates**. The first is the **x-coordinate** (across), and the second is the **y-coordinate** (up). The across street through the Corner Stone is the **x-axis**, and the up street is the **y-axis**.

A Put the landmarks back

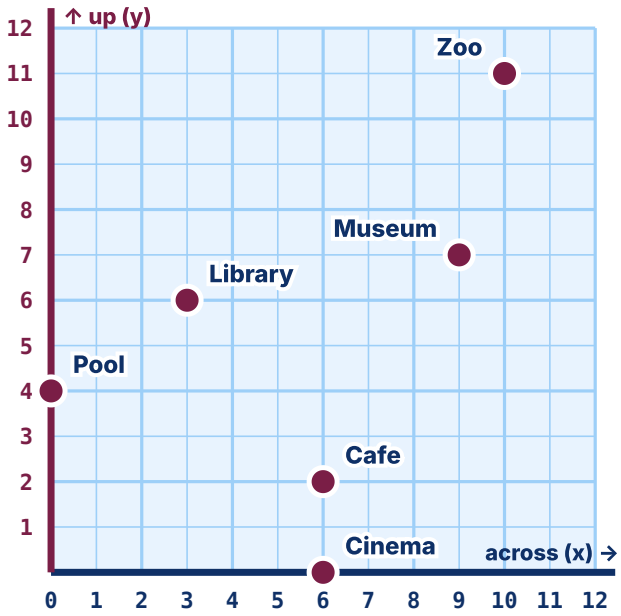
Mr Ravi's notebook lists these addresses. Mark each landmark with a dot on the map and write its name next to it. Tick it off when it's done.

☐ Bakery (4, 7)	☐ Post Office (2, 5)	☐ Bus Depot (5, 4)
☐ Farm Stall (8, 8)	☐ Bank (10, 2)	☐ Drone Pad (1, 8)
☐ Clock Tower (0, 9)	☐ Hotel (7, 0)	☐ Water Tower (11, 3)



Careful: two of these landmarks sit right on an axis, one on each. Which ones?

B Read the map



Write the address of each landmark. Across first, then up!

Library	(___ , ___)
Cafe	(___ , ___)
Zoo	(___ , ___)
Pool	(___ , ___)
Museum	(___ , ___)
Cinema	(___ , ___)

C Client requests

1. The School is at (1, 10). The new Ice Cream Cart parks **3 blocks right** of the School and **2 blocks down**. What is the cart's address? (___ , ___)

2. The new fire hydrant must stand right on the **y-axis**, the street the fire engines use. The planners suggest (5, 0), (0, 11) and (11, 11). Which one can we use? _____

D Check Leo's plan

Leo pinned three landmarks. Is each pin **right** or **wrong**? If it's wrong, say what Leo did.

1. Garden Centre at (3, 9). Leo went 9 across, then 3 up. _____

2. Toy Shop at (5, 6). Leo pinned it at (4, 5). _____

3. Market at (6, 0). Leo pinned it on the bottom street, 6 across. _____

Answers. A: the Clock Tower (0, 9) is on the y-axis and the Hotel (7, 0) is on the x-axis. B: Library (3, 6), Cafe (6, 2), Zoo (10, 11), Pool (0, 4), Museum (9, 7), Cinema (6, 0). C: 1. (4, 8). 2. (0, 11). D: 1. Wrong, he swapped the numbers. 2. Wrong, he started counting at 1. 3. Right.

THE TOWN OF GRIDHAVEN

Certified Town Planner

This certificate is proudly awarded to

for reading every address in Mr Ravi's notebook, putting the landmarks back on the map, and catching Leo's mistakes.

(x, y)
MISSION 1
COMPLETE

The Mayor

Date

Mayor of Gridhaven