

Observation Station

Hello from Abstractopia!

Ready to dive into loads of lists? Here at Abstractopia, Alon will guide you through the different ways computers use lists to solve problems.



Lots of lists!

To-do lists, packing lists, and bucket lists are just a few examples of lists we use in everyday life! In computer science, **lists** are used very similarly for **storing information in an organized way**.

What are indexes?

Each item in a list is numbered, and these numbers are called **indexes**. By assigning each item to an index (a number), it's a lot easier to search and sort through the list.

Geography Time!

Let's explore indexes further with a Geography lesson from Alon:

How we've been counting:



We count from **starting from the number 1**. Here are the planets in our galaxy listed from largest to smallest. Abstractopia's index is 1 and Logicland's index is 4.

Planet Size List

1. Abstractopia
2. Decomosphere
3. Algorithopoly
4. Logicland
5. Patteron
6. Evaluatus

How computers count:



Computers count **starting from the number 0**. As a result, each planet's index shifts by -1. Abstractopia's index is 0 and Logicland's index is 3!

Planet Size List

0. Abstractopia
1. Decomosphere
2. Algorithopoly
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5. Evaluatus

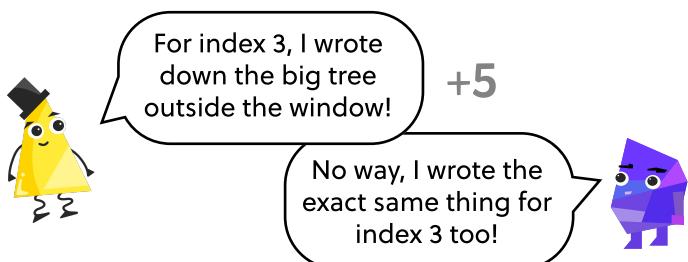
Observation Telepathy: The Game

At Abstractopia, Alon's favorite game to play with friends is Observation Telepathy!

Directions

With a friend, set a 1-minute timer and quickly jot down the **first 10 items** you observe around you. Try to make your lists as **similar as possible** without talking or making any gestures!

After you both complete your list, take turns reading your items one-by-one out loud to **compare your observations for each index** (number).



Scoring

Aim for the highest score!

Same item at same index: **5 points**

Same item at different index: **1 point**

Different item: **0 points**

My Observation List

0. _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

Our Score:



My Observation List

0. _____
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

Our Score: _____

My Observation List

0. _____
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

Our Score: _____