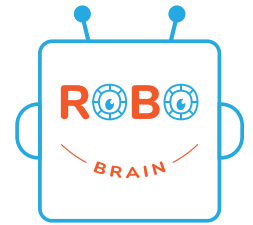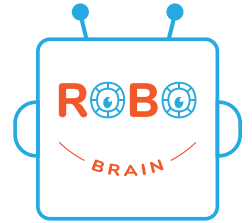# Task 1

- In Week 2, we learnt **arrays**. An array is <u>a sequence of variables</u>. Each array should have a **name** (like a street name) and some **indices** (like house numbers).

- Several aliens would like to live together on a new street. They are

- Can you
  - give each alien a name,
  - draw a street with different shapes of houses to suit the aliens,
  - give the street a suitable name,
  - write down the name of the alien in each house.
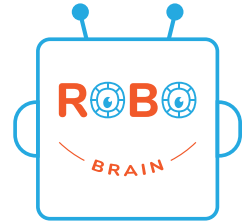 - Don't forget the house numbers!

Task 2

- The alien living at No. 1 wants to swap houses with the alien living at No. 4.
  - Remember the weirdness of the houses? As soon as the second alien moves in, the first alien will be gone.
  - So please be very careful on how you do it.
  - Draw any extra things you need to make the swap.
  - Write down step by step how to swap.

Task 3

- There is a line of train carriages parking on the track.
    - The order of the train is unfortunately meddled up.
    - Each carriage can be decoupled from and recoupled with other carriage.
    - Those carriages cannot move by themselves, but need to be pulled or pushed by an engine.
    - You may use the mainline tracks and the siding.
    - Tell how many engines you need and where to place them.
    - Tell how to put the carriages in the correct order so that the whole train (engine + carriages) can leave for Birmingham soon.

Brighton
←

Birmingham
→

?

2   3   1   5   4

end