















How do we solve problems recursively?

What if you knew that the list you were searching through was sorted? You don't know anything else (are there duplicate values, mean, mode etc). Could you do a better job at searching?

Let's say your list contains 1 million *sorted* values, in ascending order. Does it still make sense to start searching at index 0?

What if you looked at the 500,000 element first?

This gives you a lot more information than starting at 0. There are three options:

- 1. The 500,000 element is *key*.
- 2. The 500,000 element is larger than key.
- 3. The 500,000 element is smaller than key.

What can we do with each of those options?

