In CS, we're concerned w/ solving problems w/ a computer.

A problem for a computer must be defined precisely + unambiguously by its input and its desired output.

ex Sort an array.
input: array + way to compare elements
output: sorted array

compute the factorial of a pos. int
input: $n \in \mathbb{Z}^+$
output: $n!$

Note that we need the tools of discrete math to define these inputs + outputs precisely!

A solution is some method of taking in an arbitrary input and computing and output w/ desired properties defined by the problem.

Typically this method is an algorithm, a sequence of steps you can perform to get from input to output.

In practice, we write an algorithm as a mix of precise + unambiguous notation and some words to give intuition. We call this mix pseudocode.

ex

```
fact(n):
    if n=1 then
        return 1
    else
        return n · fact(n-1)
```