**Recursion**

* A recursive function has two parts:
* **Base case**: How to solve the smallest version(s) of the problem that we care about.
* **Recursive case**: How to reduce a bigger version of the problem to one or more smaller versions.
  + In order to work, the recursive case (when applied over and over) must eventually reduce every size of the problem down to the base case.

Factorial

Base Case:

Recursive Case:

**Recursive thinking:**

if (problem is sufficiently simple) { // Base Case

Directly solve the problem.

Return the solution.

}

else { // Recursive Case

Split the problem up into one or more smaller problems with a similar structure as the original.

Solve each of those smaller problems.

Combine the results to get the overall solution.

Return the overall solution.

}

Reverse a string

Base Case:

Recursive Case: