

Algorithms

They make the world go round, right?

Definition

~~“Recipe.”~~

“A list of instructions.”

How to bake a cake:

1. Make the cake.
2. Keep making it.

Definition

“A **finite** list of instructions.”

How to bake a cake:

1. Make the cake.
2. Once the cake is finished, stop making it.

Definition

“A finite list of **definite** instructions.”

How to bake a cake:

1. Mix the ingredients.
2. Put the mixed ingredients in the oven.
3. Once the cake is finished, take it out of the oven.

Definition

“A finite list of definite, **computable**, instructions.”

Finding the maximum

Need a set of repeatable instructions that the computer can follow.

Finding the maximum

Need a set of repeatable instructions that the computer can follow.

Need some simple processes that the computer is capable of.

Comparing two numbers.

Finding the maximum

1. Assume a maximum.
2. One by one, check each number.
3. If the number is greater than the maximum, change the maximum.

```
maximum = 0
for n in numbers:
    if n > maximum:
        maximum = n
```