Functions

Algorithms

Functions

- definition — describes how to — def/ signature / fn
- invocation — does that thing — call, nam (a)

4 things: Variable, Selection, ~~repetition~~, functions

recursion

Precise, unambiguous, no judgm calls **Algorithm**
+
description of how to do something

data = representation of information

Problem

information $\left[\begin{array}{l} \text{in} \\ \\ \text{out} \end{array} \right.$

Pick data structures →

Algorithm

$\left[\begin{array}{l} \text{in} \\ \left(\begin{array}{l} \text{what} \\ \text{to} \\ \text{do} \end{array} \right. \\ \text{out} \end{array} \right]$ data

addiin

Problem

in: 2 numbers

out: Sum

XLVIII + IX

48 + 9

XL IX VIIV

LVII

$$\begin{array}{r} 1 \\ 48 \\ + 9 \\ \hline 57 \end{array}$$

Heuristic $^{\text{algorithm}}$ ~ "almost" solves the problem

best / worst / most   option