Chapter 1, Computational thinking (計算的思考)

Declarative knowledge (宣言的知識)

- composed of statements of fact. (明確な事実の宣言)
- "the square root of x is a number y such that y*y = x."

Imperative knowledge (命令的知識)

- "how to" knowledge, or recipes for deducing information. (情報を導くためのレシピ、手順、手続き)
- start with a guess, g.
- if g*g is close enough to x, stop and say that g is the answer.
- otherwise create a new guess by averaging and x/g, i.e., (g+x/g)/2.
- Using this new guess, which we again call g, repeat the process until g*g is close enough to x.

Algorithm (アルゴリズム)

An algorithm is **a finite list of instructions** that describe a computation that when executed on a provided **set of inputs** will proceed though a set of well-defined states and eventually produce **an output**.