

# Algorithm

PENG

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## 1 The Role of Algorithms in Computing

### 1.1 Algorithms

**Definition 1.1** (algorithm). *Transform input into the output [1].*

## 2 Getting Started

### 2.1 Insertion sort

**Definition 2.1** (sorting problem).

*Input:*  $[a_1, a_2, \dots, a_n]$

*Output:*  $[a'_1, a'_2, \dots, a'_n]$  such that  $a'_1 \leq a'_2 \leq \dots \leq a'_n$

## References

[1] Thomas H Cormen et al. *Introduction to algorithms*. Vol. 2. MIT press Cambridge, 1990.