Ch. 1 Notation

1 Definition of Set

Define set S as an ordered collection of elements a_i

$$S \equiv a_i \in S, i = 1, 2, ..., n-1, n$$

1.1 Set Notation

1.2 Definition Ordered Set

1.3 Definition Unordered Set

2 Definition of Function "System"

Define function Φ as a map from set S_1 to set S_2

$$a_i \in S_1, i = 1, 2, ..., n-1, n$$
$$b_i \in S_2, i = 1, 2, ..., m-1, m$$
$$\Phi[n] \equiv$$

2.1 Definition of Complete Function

$$a_i \in S_1, i = 1, 2, ..., n-1, n$$
$$b_i \in S_2, i = 1, 2, ..., m-1, m$$

2.2 Definition of Incomplete Function

$$a_i \in S_1, i = 1, 2, ..., n-1, n$$
$$b_i \in S_2, i = 1, 2, ..., m-1, m$$

3 Set Notation

1. Definition of a set 1.1 Cardinality 2. Equals 3. Contains 3.1 Subset, proper subset, citation 4. Definition of complement 5. Elements of a set 6. Necessity of finiteness *

4 Definition of a System