Why

We want to associate the elements of some finite set with bit strings.

Definition

Let X be a set with $\nu m X = n$. Let $x : \{1, 2, \ldots, n\} \to X$ be an ordering of X. The *digital symbol* associated with $x_i \in X$ is the digital integer associated with the natural number i.

In this context X is called sometimes called an *alphabet* or *symbol set*.

Digital Symbols

Digital Integers

Digital Naturals

Bit Strings

Natural Powers   Codes

Natural Products   Dot-Dash Code

Natural Sums   Flash Code

Alphabets

Recursion Theorem   Lists

Set Numbers   Direct Products

Finite Sets

Equivalent Sets

Natural Order   Function Inverses   Family Unions and Intersections

Integer Numbers   Peano Axioms   Function Images   Function Composites   Families

Equivalence Relations   Functions

Natural Induction   Relations

Ordered Pair Projections

Set Products

Natural Numbers   Generalized Set Dualities   Set Powers

Set Partitions   Intersection of Empty Set   Successor Sets   Set Dualities   Unordered Triples   Set Unions and Intersections

Set Complements   Set Intersections   Pair Unions   Ordered Pairs

Set Differences   Set Unions   Pair Intersections

Empty Set   Unordered Pairs

Set Specification

Set Equality

Set Inclusion

Deductions

Quantified Statements

Logical Statements

Statements

Identities   Sets

Names

Letters   Objects

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