Why

We want to associate objects with series of the natural numbers zero and one.[1]

Definition

A *bit string* is a finite sequence in the set $\{0, 1\}$.

If the sequence has length one, we refer to it as a *bit*. Using this terminology, it is natural to call the sequence terms *bits*. Other terminology for bit strings includes *binary sring*, *bit sequence* and *digital datum*.

If the sequence has length eight, we refer to it as a *byte*. Using this terminology, a *kilobyte* is a length $8 * 2^{10}$ bitstring. In other words, a kilobyte is $2^{10} = 1024$ bytes. So a kilobyte is roughly one thousand bytes. Likewise a *megabyte* is a length $8 * 2^{20} = 1048576$ bytes.

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[1]This explanation requires one more step, which future editions will discuss.

Bitstrings

Natural Exponents

Natural Products → Sequences

Natural Sums → Families

Recursion Theorem → Functions

Peano Axioms → Relations

Natural Induction → Cartesian Products

Natural Numbers → Set Powers

Intersection of Empty Set → Successor Sets → Unordered Triples

Set Intersections → Pair Unions → Ordered Pairs

Set Differences → Set Unions

Pair Intersections → Empty Set → Unordered Pairs

Set Specification

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Identities → Sets

Names

Letters → Objects

4