Natural Square Roots

Why

We want to solve equations with squares.

Definition

Let m be a square number. We want to find n to satisfy

$$n^2 = m.$$

We call such an n a *square root* of m.

Proposition **1.** *The square root of a square number is unique.*

This result motivates definining a function the *square root function* which square numbers to their roots.

Notation

Let S denote the set of square numbers. ($S \subset \mathsf{N}$). Let $f : S \to N$ be the function such that $f(s)$ is the square root of s. We denote the result of f on n by $\sqrt{n}$.

Natural Square Roots

Equation Solutions → Square Numbers

Squares

Natural Products

Equations

Natural Numbers

Set Intersections

Set Unions

Set Specification

Empty Set

Set Inclusion

Set Equality

Sentences

Identity

Standardized Accounts

Sets

Accounts

Quantified Statements

Deductions

Logical Statements

Statements

Objects