TODO

can do it for matrices over an group

Identity Matrix

Real Matrix-Matrix Products

Real Matrix-Vector Products

Vectors as Matrices — Real Linear Combinations

Real Inner Product — Real Matrices

Real Norm — Space Inner Product — Linear Equations

Space Norm — Real Vector — Linear Functions — Arrays

Plane Norm — N-Dimensional Space — Plane Vector Sums and Differences — Space Vector — Plane Inner Product

Absolute Value — Distance — Plane Vector — Right Triangle Sides Relation

Space Distance — Real Squares

Plane Distance — Real Arithmetic

Interval Length — Real Multiplicative Inverses

Real Space — Intervals — Real Products

Real Line — Real Plane — Square Numbers — Real Additive Inverses

Integral Line — Squares — Real Order — Real Sums — Rational Arithmetic — Rational Multiplicative Inverses — Real Summation

Geometry — Rational Order — Real Numbers — Rational Sums — Rational Products

Rational Numbers

Integer Arithmetic — Lists

Natural Multiplicative Identity — Natural Additive Identity — Integer Products — Set Numbers

Arithmetic — Identity Elements — Finite Sets — Direct Products

Natural Powers — Equivalent Sets — Inverse Elements — Natural Summation

Comparison — Integer Order — Integer Sums — Natural Products — Element Function — Family Unions and Intersections — Function Inverses — Family Operations — Natural Equations

Order — Integer Numbers — Natural Sums — Operations — Function Image — Function Composites — Families — Equation

Converse Relations — Equivalence Relations — Recursion Theorem — Natural Order — Functions

Relations — Peano Axioms

Set Products — Natural Induction

Set Powers — Natural Numbers — Generalized Set Dualities

Ordered Pairs — Set Symmetric Differences — Unordered Triples — Successor Sets — Set Dualities — Intersection of Empty Set — Partitions — Set Union and Intersections

Set Complements — Pair Unions — Set Intersections

Set Differences — Set Unions — Pair Intersections

Unordered Pairs — Empty Set

Set Specification

Set Equality

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Sets — Identities

Names

Letters — Objects