Why

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Main Result

Proposition 1. *Every affine subset of R^n is an intersection of a finite family of hyperplanes.*

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[1]Future editions will include.

Affine Sets and Hyperplanes

Hyperplanes

Affine Set Dimension · Subspace Orthogonal Complements

Subspace Dimensions

Vector Space Dimensions

Vector Space Bases

Orthogonal Complements

Linearly Dependent Vectors · Affine Sets and Subspaces · Span · Inner Products · Affine Sets and Linear Equations

Linear Combinations · Translate Sets · Subspaces · Affine Sets · Real Matrices · Real Inner Product

Real Linear Combinations · Vector · Real Norm · Linear Equations

Real Vector · N-Dimensional Space · Plane Norm · Plane Inner Product · Linear Functions

Plane Vector Sums and Differences · Space Vector · Plane Vector · Distance · Right Triangle Sides Relation · Real Square

Space Distance · Absolute Value · Real Arithmetic · Square Numbers

Plane Distance · Interval Length · Real Multiplication Inverses · Squares

Real Space · Intervals · Real Products

Real Plane · Real Line · Real Additive Inverses · Real Summation

Integral Line · Real Order · Rational Arithmetic · Real Sums · Rational Multiplicative Inverses

Geometry · Rational Order · Fields · Rational Sums · Real Numbers · Rational Products

Arrays · Rings · Rational Numbers

Lists · Integer Arithmetic

Set Numbers · Natural Multiplication Identity · Natural Additive Identity · Integer Products

Direct Products · Finite Sets · Identity Elements · Arithmetic · Natural Summation · Natural Powers

Family Unions and Intersection · Inverse Elements · Equivalent Sets · Integer Order · Integer Sums · Natural Equations · Natural Products

Comparisons · Function Inverses · Element Functions · Family Operations · Operations · Order · Integer Numbers · Equations · Natural Sums

Families · Function Composites · Function Images · Converse Relations · Function · Equivalence Relations · Natural Order · Recursion Theorem

Relation · Peano Axioms

Set Products · Natural Induction

Set Powers · Generalized Set Dualities

Unordered Triples · Natural Numbers

Set Unions and Intersection · Successor Sets · Intersection of Empty Set · Set Dualities · Partitions · Set Symmetric Differences

Ordered Pairs · Pair Unions · Set Intersections · Set Complements

Pair Intersections · Set Unions · Set Differences

Unordered Pairs · Empty Set

Set Specification

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Sets · Identities

Names

Letters · Objects

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