Why

If, at step k of elimination, every entry $X_{k:m,k:m}$ of the working matrix is considered as a possible pivot, there are $O((m-k)^2)$ entries to examine.

Partially Pivoted Row Reductions

Pivoted Row Reductions

Ordinary Row Reductions

Linear System Row Reductions

Linear Equation Solutions

Linear Equations

Linear Functions

Arrays

N-Dimensional Space

Distance

Space Distance

Plane Distance

Interval Length

Real Space

Interval

Real Plane

Real Line

Integral Line

Real Order

Real Summation

Geometry

Real Numbers

Rational Order

Rational Numbers

Lists

Integer Arithmetic

Set Numbers

Natural Multiplicative Identity

Natural Additive Identity

Integer Products

Direct Products

Finite Sets

Identity Elements

Arithmetic

Equivalent Sets

Natural Summation

Natural Powers

Family Unions and Intersections

Function Inverses

Family Operations

Comparisons

Integer Order

Integer Sums

Natural Equations

Natural Products

Families

Function Images

Function Composites

Operations

Orders

Integer Numbers

Equations

Natural Sums

Functions

Converse Relations

Equivalence Relations

Natural Order

Recursion Theorem

Relations

Peano Axioms

Set Products

Natural Induction

Generalized Set Dualities

Set Powers

Natural Numbers

Set Unions and Intersections

Set Dualities

Unordered Triples

Intersection of Empty Set

Successor Sets

Partitions

Set Symmetric Differences

Ordered Pairs

Pair Union

Set Intersections

Set Complements

Pair Intersection

Set Unions

Set Differences

Unordered Pairs

Empty Set

Set Specification

Set Equality

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Sets

Identities

Names

Letters

Objects