

Xmath Documentation

October 28, 2020

Contents

1	Introduction	1
2	Macros	1
2.1	Classical sets	1
2.2	Other sets	2
2.3	Operators	2
2.4	Others	3
3	License	3

1 Introduction

The Xmath package is an easy way to write math in \LaTeX . Xmath is an extension of the `amsthm`, `amssymb`, `amsmath`, `dsfont`, `stmaryrd`, `mathrsfs`, `eufrak`, `yfonts` and `txfonts` packages. This package implements a large number of macros for sets, functions, operators commonly used in math. Xmath is a project developed by Martin Debaisieux, student at the University of Mons (UMONS) in Belgium. If you have any suggestions, please send me a pull request on <https://github.com/MartinDbx/xmath-package>.

2 Macros

2.1 Classical sets

- `\nat` The set of all natural numbers \mathbb{N} .
- `\intg` The set of all integer numbers \mathbb{Z} .
- `\rat` The set of all rational numbers \mathbb{Q} .
- `\real` The set of all real numbers \mathbb{R} .

`\comp` The set of all complex numbers \mathbb{C} .
`\field` The field \mathbb{F} .
`\znz` The ring $\mathbb{Z}/n\mathbb{Z}$. This macro takes as argument the value of n .

2.2 Other sets

`\A` The alternating group A .
`\Aut` The automorphism group Aut .
`\D` The dihedral group D .
`\E` The set E .
`\im` The image set im .
`\GL` The general linear group GL .
`\Graph` The graph set Graph .
`\L` The L space.
`\M` The matrix set M .
`\N` The normalizer N .
`\O` The orthogonal group O .
`\Orb` The orbit Orb .
`\Q` The quaternion group Q .
`\SL` The special linear group SL .
`\SO` The special orthogonal group SO .
`\Stab` The stabilizer set Stab .
`\S` The symmetric group S .
`\Z` The center of a group Z .

2.3 Operators

- `\card` The cardinality of a set `card`.
- `\Id` The identity function `Id`.
- `\normal` The sub group normal symbol \triangleleft .
- `\gen` The generating set of a group $\langle g \rangle$. This macro takes as argument the value of g .
- `\ord` The order of an element `ord`.
- `\pgcd` [FR] The greatest common divisor `pgcd`.
- `\ppcm` [FR] The lowest common multiple `ppcm`.
- `\sign` The signature of an element `sign`.
- `\Var` The variance function `Var`.

2.4 Others

- `\xbox` Draw a box around your parameter x \boxed{x} .

3 License

Copyright © 2020 by Martin Debaisieux. This file may be distributed and/or modified under the conditions of the L^AT_EX Project Public License, either version 1.3 of this license or (at your option) any later version. The latest version of this license is in <http://www.latex-project.org/lppl.txt> and version 1.3 or later is part of all distributions of L^AT_EX version 2005/12/01 or later.