The Xmath[2] LaTeX 2ε Macros for Manuscript Preparation

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Abstract

The Xmath[2] *package is an easy way to write math in LaTeX 2ε.* Xmath[2] *is an extension of frequently used mathematical packages with new commands and environments. This package was mainly designed for English users but it includes some macros reserved for French users.*

Contents

1 Patch notes

This is the version 2.0.0 of Xmath[2]. This update brings the addition of algebraic, analytical, logical and probabilistic operators and mathematical sets. This document was last compiled on January 26, 2021.

2 Extensions

This package is an extension of the amsthm[7], amssymb[8], amsmath[9], dsfont stmaryrd[3], mathrsfs[4], mdframed[1], yfonts[6] and xstring[10] packages. All rights reserved to their authors.

3 Commands

3.1 Algebra

3.1.1 Sets

\A : alternating.
\ACF : algebraic closure field.

\Aut : automorphism.
\dom : domain.
\D : derived.
\E : set.
\G : Galois.
\Hom : homomorphism.
\im : image.
\Int : interior.
\IC : complex.
\IF : field.
\IK : corps.
\IN : natural.
\IP : prime.
\IQ : rational.
\IR : real.
\IS : sphere.
\IZ : integer.
\GL : linear group.
\L : linear.
\M : matrix.
\N : normalizer.
\O : orthogonal.
\Orb : orbit.
\Q : quaternion.
\set{#1}{#2} : set {#1|#2}.
\SL : special linear.
\SO : special orthogonal.
\Stab : stabilizer.
\S : symmetric.
\Z : centralizer.
\ZnZ{#1} : ring of integers modulo #1 with an adaptive style .

3.1.2 Objects

\vect[d1][d2]{#1} : creates a vector. If there is no optional argument, then it creates a vector of the variable #1 from 1 to n. If d1 is present and if d1 is an integer, then it creates a vector of the variable #1 from d1 to n. However, if d1 is not an integer, then it creates a vector of the variable #1 from 1 to d1. Finally, if every argument is present, then it creates a vector of the variable #1 from d1 to d2.

3.1.3 Operators

\card : cardinality.
\Car : caractéristique.
\cis : $x \mapsto \cos(x) + i\sin(x)$ contraction.
\ev : evaluation.
\Frac : fraction.
\Id : identity.
\normal : normal.
\gen{#1} : generated by #1.
\ord : order.
\pgcd : plus grand commun diviseur.
\ppcm : plus petit commun multiple.
\sign : signature.

3.2 Analysis

3.2.1 Sets

\Graph : graph set ;
\Le : Lebesgue space ;
\T : topology ;
\Va{#1} : neighbourhood of #1.

3.2.2 Operators

\dist : distance ;
\rest{#1}{#2} : restriction of #1 on #2.

3.3 Logic

\Conseq : consequence.
\Frechet : Frêchet.
\Th : theory.

3.4 Probability and Statistics

\Var : variance.

4 Environments

All the environments were developed for French users except the last one.
\corollary : corollaire encadré.
\definition : définition encadrée.
\lemma : lemme encadré.
\property : propriété encadrée.
\properties : propriétés encadrées.
\proposition : proposition encadrée.
\theorem : théorème encadré.
\rcases : right cases.

5 Others

\hooklongleftarrow : $\longleftarrow$.
\hooklongrightarrow : $\longrightarrow$.
\longsimleftarrow : $\xleftarrow{\sim}$.
\longsimrightarrow : $\xrightarrow{\sim}$.
\longtwoheadleftarrow : $\twoheadleftarrow$.
\longtwoheadrightarrow : $\twoheadrightarrow$.
\quot : quotient with an adaptive style.
\simleftarrow : $\xleftarrow{\sim}$.
\simrightarrow : $\xrightarrow{\sim}$.
\widebar : adaptive bar solving the size problems of \bar and \overline.
\xbox{#1} : box around #1.
\Xmath : Xmath logo.

6 Contact

If you have a suggestion or if you encounter a problem with Xmath[2], send me a pull request on https://github.com/MartinDbx/xmath-package.

References

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