

Sample Document

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1 Boxes

Theorem 1

A sample theorem.

Lemma 2

A sample lemma.

Claim 3

A sample claim.

Proposition 4

A sample proposition.

Corollary 5

A sample corollary.

Conjecture 6

A sample conjecture.

Algorithm 7

A sample algorithm.

Definition 8

A sample definition.

Example 9

A sample example.

Fact 10

A sample fact.

Note 11

A sample note.

Problem 12

A sample problem.

Question 13

A sample question.

Exercise 14

A sample exercise.

Remark 15

A sample remark.

2 Commands

2.1 Colors

Seven new darker colors may be used:

- `\mszred` for **red**,
- `\mszgreen` for **green**,
- `\mszblue` for **blue**,
- `\mszyellow` for **yellow**,
- `\mszcyan` for **cyan**,
- `\mszmagenta` for **magenta**, and
- `\mszorange` for **orange**.

2.2 Emphasizing

- `\txb` may be used to **bold**.
- `\txc` may be used to **change color**.
- `\txbc` may be used to **bold and change color**.

2.3 Mathematical fonts

- `\mbf{A}` may be used for `\mathbf{A}`: **A**.
- `\mbb{A}` may be used for `\mathbb{A}`: **A**.
- `\mcl{A}` may be used for `\mathcal{A}`: **A**.
- `\mrn{A}` may be used for `\mathrm{A}`: **A**.
- `\tx{A}` may be used for `\text{A}`: **A**.

2.4 Delimiters

- `\braces{}` may be used for **{braces}**.
- `\parens{}` may be used for **(parentheses)**.

- `\brackets{}` may be used for $[brackets]$.
- `\bbrackets{}` may be used for $\llbracket double\ brackets \rrbracket$.
- `\angles{}` may be used for $\langle angle\ brackets \rangle$.
- `\verts{}` may be used for $|vertical\ bars|$.
- `\Verts{}` may be used for $\|double\ vertical\ bars\|$.
- `\floor{}` may be used for $\lfloor floor\ delimiters \rfloor$.
- `\ceil{}` may be used for $\lceil ceiling\ delimiters \rceil$.

2.5 Ordinal numbers

- `\onth` may be used to denote superscript th, as in 0^{th} .
- `\onst` may be used to denote superscript st, as in 1^{st} .
- `\onnd` may be used to denote superscript nd, as in 2^{nd} .
- `\onrd` may be used to denote superscript rd, as in 3^{rd} .

2.6 General

The following operators may be used:

- `\argmin` for \argmin ,
- `\argmax` for \argmax ,
- `\Re` for Re ,
- `\Im` for Im ,
- `\cis` for cis ,
- `\arcsinh` for $\operatorname{arcsinh}$,
- `\arccosh` for $\operatorname{arccosh}$,
- `\arctanh` for $\operatorname{arctanh}$, and
- `\sign` for sign .

2.7 Statistics

The following operators may be used:

- `\Prb` for the probability operator \mathbb{P} ,
- `\Exp` for the expectation operator \mathbb{E} ,
- `\Var` for the variance operator Var , and
- `\Cov` for the covariance operator Cov .

2.8 Calculus

- `\dv{f}{x}` may be used for a first derivative: $\frac{df}{dx}$.
- `\ddv{f}{x}` may be used for a second derivative: $\frac{d^2f}{dx^2}$.
- `\dnv{f}{x}{n}` may be used for an n^{th} derivative: $\frac{d^n f}{dx^n}$.
- `\pdv{f}{x}` may be used for a first partial derivative: $\frac{\partial f}{\partial x}$.
- `\pddv{f}{x}` may be used for a second partial derivative: $\frac{\partial^2 f}{\partial x^2}$.
- `\pdnv{f}{x}{n}` may be used for an n^{th} partial derivative: $\frac{\partial^n f}{\partial x^n}$.
- `\grad` may be used to denote the gradient operator: $\text{grad } f$.
- `\div` may be used to denote the divergence operator: $\text{div } f$.
- `\curl` may be used to denote the curl operator: $\text{curl } f$.