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 Emphasizing

- `\vocab` may be used to **bold and change color**.
- `\answer` may be used to change color.

2.2 Mathematical fonts

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

2.3 Delimiters

- `\braces{}` may be used for $\{$braces$\}$.
- `\parens{}` may be used for $($parentheses$)$.
- `\brackets{}` may be used for $[$brackets$]$.
- `\bbrackets{}` may be used for $[\![$double brackets$]\!]$.
- `\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$\rceil$.

2.4 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}.

2.5 General

The following operators may be used:

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

2.6 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.

2.7 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: $\frac{d^nf}{dx^n}$.
- `\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: $\operatorname{grad} f$.
- `\div` may be used to denote the divergence operator: $\operatorname{div} f$.
- `\curl` may be used to denote the curl operator: $\operatorname{curl} f$.