

835 Notation Glossary

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This glossary provides a simple list of some useful notation for PS835. The items in parentheses provide the \LaTeX code for the mathematical notation represented here. If you operationalize these \LaTeX commands, note that they are considered mathematical and you will therefore need to contain them in a “math environment” either with $\$ \$$ or $\backslash[]\backslash$ (or by opening and closing a formal equation environment).

I will update this glossary as and when we encounter additional notation in the course.

1 Preference Relations

Weak preference relations	R or \geq or \succeq	(<code>\geq</code> or <code>\succeq</code>)
Strict preference relations	P or $>$ or \succ	(<code>></code> or <code>\succ</code>)
Indifference relations	I or $=$ or \approx	(<code>=</code> or <code>\approx</code>)
“And”	\wedge or $\&$	(<code>\wedge</code> or <code>\&</code>)
“Not”	\neg or \sim	(<code>\neg</code> or <code>\sim</code>)

2 Delimiters*

Open Set	$()$	(<code>()</code>)
Closed Set	$[]$	(<code>[]</code>)
Set	$\{\}$	(<code>\{ \}</code>)

* In \LaTeX , if you type `\right` or `\left` before the delimiter, it will automatically resize to fit its contents. This is useful if, e.g., you have a large fraction inside parentheses.

3 Accents

Hat	\hat{x}	(<code>\hat{x}</code>)
Bar	\bar{x}	(<code>\bar{x}</code>)
Dot	\dot{x}	(<code>\dot{x}</code>)
Tilde	\tilde{x}	(<code>\tilde{x}</code>)

4 Logical Operators, Relation Notation, and Other

Not Equal	\neq	(\neq)
Equivalent (indicates definition)	\equiv	(\equiv)
“Such that”	or :	(\mid or \colon)
“Is parallel to”	\parallel	(\parallel)
“Is perpendicular/orthogonal to”	\perp	(\perp)
“Converges to OR Implies”	\rightarrow	(\rightarrow)
“Implies”	\Rightarrow	(\Rightarrow)
“If and only if”	\Leftrightarrow or iff	(\Leftrightarrow)
“There exists”	\exists	(\exists)
“For all”	\forall	(\forall)
“Empty or Null Set”	\emptyset	(\emptyset)
Partial derivatives	∂	(\partial)
Infinity	∞	(\infty)

5 Common Greek Letters with English pronunciation (lower case)

α	alpha	(\alpha)
β	beta	(\beta)
γ	gamma	(\gamma)
δ	delta	(\delta)
ϵ	epsilon	(\epsilon)
ζ	zeta	(\zeta)
η	eta	(\eta)
θ	theta	(\theta)
ν	nu	(\nu)
ρ	rho	(\rho)
σ	sigma	(\sigma)
τ	tau	(\tau)
ϕ	phi	(\phi)
φ	phi (variant)	(\varphi)
ψ	psi	(\psi)
ω	omega	(\omega)