

# Cheatsheet for the *macros.sty* file

July 6, 2020

## 1 Operations

- $\backslash\text{vect}\{x\}$  –  $\text{vec}(x)$
- $\backslash\text{Diag}\{x\}$  –  $\text{Diag}\{x\}$
- $\backslash\text{diag}\{x\}$  –  $\text{diag}\{x\}$
- $\backslash\text{rank}\{x\}$  –  $\text{rank}(x)$
- $\backslash\text{spark}\{x\}$  –  $\text{spark}(x)$
- $\backslash\text{card}\{x\}$  –  $\text{card}(x)$
- $\backslash\text{trace}\{x\}$  –  $\text{Tr}\{x\}$
- $\backslash\text{supp}\{x\}$  –  $\text{supp}(x)$
- $\backslash\text{expval}\{x\}$  –  $\text{E}\{x\}$
- $\backslash\text{cov}\{x\}$  –  $\text{Cov}\{x\}$
- $\backslash\text{prob}\{x\}$  –  $\text{Pr}\{x\}$
- $\backslash\text{var}\{x\}$  –  $\text{Var}\{x\}$
- $\backslash\text{lpf}\{x\}$  –  $\text{LPF}\{x\}$

## 2 Most Common Sets

- $\backslash\text{Rset}$  –  $\mathbb{R}$
- $\backslash\text{Cset}$  –  $\mathbb{C}$
- $\backslash\text{Nset}$  –  $\mathbb{N}$
- $\backslash\text{Zset}$  –  $\mathbb{Z}$
- $\backslash\text{Qset}$  –  $\mathbb{Q}$
- $\backslash\text{Dset}$  –  $\mathbb{D}$

## 3 Trigonometry

- $\backslash\cos(x)$  –  $\cos(x)$
- $\backslash\cosh$  –  $\cosh$
- $\backslash\text{sen}$  –  $\text{sen}$
- $\backslash\text{senh}$  –  $\text{senh}$
- $\backslash\text{tg}$  –  $\text{tg}$
- $\backslash\text{tgh}$  –  $\text{tgh}$
- $\backslash\text{ctg}$  –  $\text{ctg}$
- $\backslash\text{ctgh}$  –  $\text{ctgh}$

## 4 mathrm

'Normal' text in math environment.

- $\backslash\text{arm}$  –  $\text{a}$
- $\backslash\text{zrm}$  –  $\text{z}$
- $\backslash\text{Arm}$  –  $\text{A}$
- $\backslash\text{Zrm}$  –  $\text{Z}$

## 5 mathcal

Calligraphic font.

- $\backslash\text{Arm}$  –  $\mathcal{A}$
- $\backslash\text{Zrm}$  –  $\mathcal{Z}$

## 6 mathsf

Sans serif.

- $\backslash\text{arm}$  –  $\text{a}$
- $\backslash\text{zrm}$  –  $\text{z}$
- $\backslash\text{Arm}$  –  $\text{A}$
- $\backslash\text{Zrm}$  –  $\text{Z}$

## 7 mathbf

Bold face.

- $\backslash\text{abf}$  –  $\mathbf{a}$
- $\backslash\text{zbf}$  –  $\mathbf{z}$
- $\backslash\text{Abf}$  –  $\mathbf{A}$
- $\backslash\text{Zbf}$  –  $\mathbf{Z}$

## 8 boldsymbol

Bold symbol.

- $\backslash\text{abs}$  –  $\mathbf{a}$
- $\backslash\text{zbs}$  –  $\mathbf{z}$
- $\backslash\text{Abs}$  –  $\mathbf{A}$
- $\backslash\text{Zbs}$  –  $\mathbf{Z}$

## 9 Tilde

Tilde

- $\backslash\text{atil} - \tilde{a}$
- $\backslash\text{ztil} - \tilde{z}$
- $\backslash\text{Atil} - \tilde{A}$
- $\backslash\text{Ztil} - \tilde{Z}$

## 10 tilde + mathbf

Tilde + Bold face.

- $\backslash\text{abftil} - \tilde{\mathbf{a}}$
- $\backslash\text{zbftil} - \tilde{\mathbf{z}}$
- $\backslash\text{Abftil} - \tilde{\mathbf{A}}$
- $\backslash\text{Zbftil} - \tilde{\mathbf{Z}}$

## 11 tilde + mathbf

Tilde + mathbf.

- $\backslash\text{abft} - \tilde{\mathbf{a}}$
- $\backslash\text{zbft} - \tilde{\mathbf{z}}$
- $\backslash\text{Abft} - \tilde{\mathbf{A}}$
- $\backslash\text{Zbft} - \tilde{\mathbf{Z}}$

## 12 Hat

Hat.

- $\backslash\text{ahat} - \hat{a}$
- $\backslash\text{zhat} - \hat{z}$
- $\backslash\text{Ahat} - \hat{A}$
- $\backslash\text{Zhat} - \hat{Z}$

## 13 Hat + mathbf

Hat + bold face.

- $\backslash\text{abfh} - \hat{\mathbf{a}}$
- $\backslash\text{zbfh} - \hat{\mathbf{z}}$
- $\backslash\text{Abfh} - \hat{\mathbf{A}}$
- $\backslash\text{Zbfh} - \hat{\mathbf{Z}}$

## 14 hat + boldsymbol

Hat + Bold symbol.

- $\backslash\text{absh} - \hat{\mathbf{a}}$
- $\backslash\text{zbsh} - \hat{\mathbf{z}}$
- $\backslash\text{Absh} - \hat{\mathbf{A}}$
- $\backslash\text{Zbsh} - \hat{\mathbf{Z}}$

## 15 Ring

Ring.

- $\backslash\text{aring} - \mathring{a}$
- $\backslash\text{zring} - \mathring{z}$
- $\backslash\text{Aring} - \mathring{A}$
- $\backslash\text{Zring} - \mathring{Z}$

## 16 Ring + mathbf

Ring + bold face.

- $\backslash\text{aringbf} - \mathring{\mathbf{a}}$
- $\backslash\text{zringbf} - \mathring{\mathbf{z}}$
- $\backslash\text{Aringbf} - \mathring{\mathbf{A}}$
- $\backslash\text{Zringbf} - \mathring{\mathbf{Z}}$

## 17 Greek letter + bold symbols

- $\backslash\text{Phibf} - \Phi$
- $\backslash\text{Lambdabf} - \Lambda$
- $\backslash\text{Deltabf} - \Delta$
- $\backslash\text{alphabf} - \alpha$
- $\backslash\text{betabf} - \beta$
- $\backslash\text{gammabf} - \gamma$
- $\backslash\text{deltabf} - \delta$
- $\backslash\text{epsilonbf} - \epsilon$
- $\backslash\text{etabf} - \eta$
- $\backslash\text{thetabf} - \theta$
- $\backslash\text{varthetabf} - \vartheta$
- $\backslash\text{iotabf} - \iota$
- $\backslash\text{kappabf} - \kappa$

- $\backslash\text{lamdbabf} - \lambda$
- $\backslash\text{mubf} - \mu$
- $\backslash\text{nubf} - \nu$
- $\backslash\text{xibf} - \xi$
- $\backslash\text{oobf} - \varnothing$
- $\backslash\text{pibf} - \pi$
- $\backslash\text{varpibf} - \varpi$
- $\backslash\text{taubf} - \tau$
- $\backslash\text{upsilonbf} - \upsilon$
- $\backslash\text{phibf} - \phi$
- $\backslash\text{chibf} - \chi$
- $\backslash\text{psibf} - \psi$
- $\backslash\text{omegabf} - \omega$
- $\backslash\text{Pibf} - \Pi$
- $\backslash\text{Sigmaf} - \Sigma$