

Cheatsheet for the *macros.sty* file

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Import the *macros.sty* files with `\usepackage{macros}` and use the commands in this cheatsheet.

1 Operations

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

2 Most Common Sets

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

3 Trigonometry

- `\cos(x)` – $\cos(x)$
- `\cosh` – \cosh
- `\sen` – \sin
- `\sinh` – \sinh
- `\tg` – \tan
- `\tgh` – \tanh
- `\ctg` – \cot
- `\ctgh` – \coth

4 `\mathrm`

'Normal' text in math environment.

- `\arm` – \mathbf{a}
- `\zrm` – \mathbf{z}
- `\Arm` – \mathbf{A}
- `\Zrm` – \mathbf{Z}

5 `\mathcal`

Calligraphic font.

- `\Arm` – \mathcal{A}
- `\Zrm` – \mathcal{Z}

6 `\mathsf`

Sans serif.

- `\arm` – \mathbf{a}
- `\zrm` – \mathbf{z}
- `\Arm` – \mathbf{A}
- `\Zrm` – \mathbf{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

- $\backslash\mathrm{Phibf} - \Phi$
- $\backslash\mathrm{Lambdabf} - \Lambda$
- $\backslash\mathrm{Deltabf} - \Delta$
- $\backslash\mathrm{alphabf} - \alpha$
- $\backslash\mathrm{betabf} - \beta$
- $\backslash\mathrm{gammabf} - \gamma$
- $\backslash\mathrm{deltabf} - \delta$
- $\backslash\mathrm{epsilonbf} - \epsilon$
- $\backslash\mathrm{etabf} - \eta$
- $\backslash\mathrm{thetabf} - \theta$
- $\backslash\mathrm{varthetabf} - \vartheta$
- $\backslash\mathrm{iotabf} - \iota$
- $\backslash\mathrm{kappabf} - \kappa$
- $\backslash\mathrm{lambdabf} - \lambda$
- $\backslash\mathrm{mubf} - \mu$
- $\backslash\mathrm{nubf} - \nu$
- $\backslash\mathrm{xibf} - \xi$
- $\backslash\mathrm{oobf} - \emptyset$
- $\backslash\mathrm{pibf} - \pi$
- $\backslash\mathrm{varpibf} - \varpi$
- $\backslash\mathrm{taubf} - \tau$
- $\backslash\mathrm{upsilonbf} - \upsilon$
- $\backslash\mathrm{phibf} - \phi$
- $\backslash\mathrm{chibf} - \chi$
- $\backslash\mathrm{psibf} - \psi$
- $\backslash\mathrm{omegabf} - \omega$
- $\backslash\mathrm{Pibf} - \Pi$
- $\backslash\mathrm{Sigmabf} - \Sigma$