# Liii STEM Input Method Cheatsheet

November 28, 2025

*Liii STEM (https://liiistem.cn/) is a WYSIWYG editor that can speed up your mathematical writing by 10x. See Quick formula editing for more details. This is a pdf version cheatsheet of the keys available in Liii STEM Input Method.*

*Unlike the shorcut hints inside Liii STEM. We distinguish the capital and noncapital letters in this cheatsheet; For example, J and j are different. We also use ⇧j to replace J where ⇧ represents the Shift key.*

*When no plus sign is shown between different keyboard keys, it means they should be pressed in sequence. Alternatively, a plus sign between them means they should be pressed at the same time.*

*For modifier keys (and their combination such as ctrl⇧) ⇧, ctrl, alt (Windows) or option (Mac), and cmd (Mac), the plus sign after them means to hold down the modifier key while pressing the next key. For example, ctrl + s means to hold down the ctrl key and press the s key.*

*All tab keys represents tab varient. For example, to insert ∇, press ⇧v and press tab twice. To insert Φ, press ⇧v and press tab once. In the rest of this tutorial, we do specify the exact number of tab we used, i.e., the keyboard expression for both ∇ and Φ is shift v + tab.*

| Windows / GNU/Linux | Mac | Equivalent in LaTeX |
|---|---|---|
| **Environmental Shortcuts** | | |
| space + tab | space + tab | Non-breaking space (\nbsp or ~ ) |
| ctrl + t | \ | \indent |
| ctrl + l | \ | \raggedleft |
| ctrl + e | \ | \centering |
| ctrl + r | \ | \raggedright |
| alt + 1 | option + 1 | \section |
| alt + 2 | option + 2 | \subsection |
| alt + 3 | option + 3 | \subsubsection |
| alt + 4 | option + 4 | \paragraph |
| alt + 5 | option + 5 | \subparagraph |
| alt + 6 | option + 6 | \appendix |
| + + tab | + + tab | \itemize |
| 1 + . + tab | 1 + . + tab | \enumerate |
| $ | $ | inline math mode |
| alt + $ | option + $ | single-line math mode |

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| Windows / GNU/Linux | Mac | Equivalent in LaTeX |
|---|---|---|
| alt + & | option + & | multi-line math: eqnarray |
| ctrl + $ | ctrl + $ | multi-line math: align |
| ctrl + # | ctrl + # | add equation number |
| alt + arrow | option + arrow | add new row/column in *matrix/table/choice/stack* |
| ctrl⇧ + f | ctrl⇧ + f | add footnote |
| ctrl + n | cmd + n | add new script |
| ctrl + p | cmd + p | export to PDF |
| **Common Constructs** | | |
| x + ^ + 2 | x + ^ + 2 | $x^2$ (x^2) |
| x + _ + i + , + j | x + _ + i + , + j | $x_{i,j}$ (x_{i,j}) |
| alt + s + 2 | option + s + 2 | $\sqrt{2}$ (\sqrt{2}) |
| alt + s + Tab + 3 + ← + ← + n | option + s + Tab + 3 + ← + ← + n | $\sqrt[n]{3}$ (\sqrt[n]{3}) |
| alt + f | option + f | $\frac{2}{3}$ (\frac{2}{3}) |
| **Font** | | |
| A + A | A + A | Blackground $\mathbb{A}$ (\mathbb{A}) |
| F7 + A or A + A + tab | F7 + A or A + A + tab | Calligraphic $\mathcal{A}$ (\mathcal{A} ) |
| F8 + A or A + A + tab | F8 + A or A + A + tab | Gothic $\mathfrak{A}$ (\mathfrak{A}) |
| ctrl + b + A or A + A + tab | cmd + b + A or A + A + tab | Bold $\mathbf{A}$ (\mathbf{A}) |
| ctrl + i + A | cmd + i + A | Italic $A$ (\mathit{A}) |
| **Greek Letters** | | |
| a + tab | a + tab | $\alpha$ (\alpha) |
| b + tab | b + tab | $\beta$ (\beta) |
| g + tab, G + tab | g + tab, G + tab | $\gamma$ (\gamma), $\Gamma$ (\Gamma) |
| d + tab, D + tab | d + tab, D + tab | $\delta$ (\delta), $\Delta$ (\Delta) |
| e + tab | e + tab | $\epsilon$ (\epsilon) |
| e + tab | e + tab | $\varepsilon$ (\varepsilon) |
| z + tab | z + tab | $\zeta$ (\zeta) |

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| Windows / GNU/Linux | Mac | Equivalent in LaTeX |
|---|---|---|
| h + tab | h + tab | $\eta$ (\eta) |
| j + tab, J + tab | j + tab, J + tab | $\theta$ (\theta), $\Theta$ (\Theta) |
| j + tab | j + tab | $\vartheta$ (\vartheta) |
| i + tab | i + tab | $\iota$ (\iota) |
| k + tab | k + tab | $\kappa$ (\kappa) |
| l + tab, L + tab | l + tab, L + tab | $\lambda$ (\lambda), $\Lambda$ (\Lambda) |
| m + tab | m + tab | $\mu$ (\mu) |
| n + tab | n + tab | $\nu$ (\nu) |
| x + tab, X + tab | x + tab, X + tab | $\xi$ (\xi), $\Xi$ (\Xi) |
| p + tab, P + tab | p + tab, P + tab | $\pi$ (\pi), $\Pi$ (\Pi) |
| p + tab | p + tab | $\varpi$ (\varpi ) |
| r + tab | r + tab | $\rho$ (\rho) |
| r + tab | r + tab | $\varrho$ (\varrho) |
| s + tab, S + tab | s + tab, S + tab | $\sigma$ (\sigma), $\Sigma$ (\Sigma) |
| s + tab | s + tab | $\varsigma$ (\varsigma) |
| t + tab | t + tab | $\tau$ (\tau) |
| u + tab, U + tab | u + tab, U + tab | $\upsilon$ (\upsilon), $\Upsilon$ (\Upsilon) |
| f + tab, F + tab | f + tab, F + tab | $\phi$ (\phi), $\Phi$ (\Phi) |
| f + tab | f + tab | $\varphi$ (\varphi) |
| q + tab | q + tab | $\chi$ ($\chi $) |
| y + tab, Y + tab | y + tab, Y + tab | $\psi$ (\psi), $\Psi$ (\Psi) |
| w + tab, W + tab | w + tab, W + tab | $\omega$ (\omega), $\Omega$ (\Omega) |
| **Sets and Logic** | | |
| % + tab | % + tab | $\cup$ (\cup) |
| & + tab | & + tab | $\cap$ (\cap) |
| < + tab | < + tab | $\subset$ (\subset) |
| < + tab + = | < + tab + = | $\subseteq$ (\subseteq) |
| > + tab | > + tab | $\supset$ (\supset) |

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| Windows / GNU/Linux | Mac | Equivalent in LaTeX |
|---|---|---|
| > + tab + = | > + tab + = | $\supseteq$ (\supseteq) |
| < + tab | < + tab | $\in$ (\in) |
| > + tab | > + tab | $\ni$ (\ni) |
| < + tab + / | < + tab + / | $\notin$ (\notin) |
| R + R | R + R | $\mathbb{R}$ (\mathbb{R}) |
| Z + Z | Z + Z | $\mathbb{Z}$ (\mathbb{Z}) |
| Q + Q | Q + Q | $\mathbb{Q}$ (\mathbb{Q}) |
| N + N | N + N | $\mathbb{N}$ (\mathbb{N}) |
| C + C | C + C | $\mathbb{C}$ (\mathbb{C}) |
| @ + / | @ + / | $\varnothing$ (\varnothing) |
| A + tab | A + tab | $\aleph$ (\aleph) |
| = + tab | = + tab | $\equiv$ (\equiv) |
| A + tab | A + tab | $\forall$ (\forall ) |
| E + tab | E + tab | $\exists$ (\exists ) |
| ! + tab | ! + tab | $\neg$ (\neg ) |
| % | % | $\vee$ (\vee) |
| & | & | $\wedge$ (\wedge) |
| \| + tab + - | \| + tab + - | $\vdash$ (\vdash ) |
| \| + tab + = | \| + tab + = | $\models$ (\models) |
| = + > | = + > | $\Rightarrow$ (\Rightarrow) |
| = + > + / | = + > + / | $\nRightarrow$ (\nRightarrow) |
| **Decorations** | | |
| alt + ˙ + A | option + ˙ + A | $\dot{A}$ (\dot{A}) |
| alt + " + A | option + " + A | $\ddot{A}$ (\ddot{A}) |
| alt + ˙ + ˙ + A | option + ˙ + ˙ + A | vertical two dots |
| alt + " + tab + A | option + " + tab + A | horizontal three dots |
| alt + " + tab + A | option + " + tab + A | horizontal four dots |
| alt + ^ + A | option + ^ + A | $\hat{A}$ (\hat{A}) |

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| Windows / GNU/Linux | Mac | Equivalent in LaTeX |
|---|---|---|
| alt + ~ + A | option + ~ + A | $\tilde{A}$ (\tilde{A}) |
| alt + ⇧ + b + A | option + ⇧ + b + A | $\bar{A}$ (\bar{A}) |
| alt + - + A | option + - + A | $\overline{A}$ (\overline{A}) |
| ctrl + u + A | ctrl + u + A | $\underline{A}$ (\underline{A}) |
| alt + ⇧ + v + A | option + ⇧ + v + A | $\vec{A}$ (\vec{A}) |
| alt + ⇧ + c + A | option + ⇧ + c + A | $\check{A}$ (\check{A}) |
| alt + ⇧ + u + A | option + ⇧ + u + A | $\breve{A}$ (\breve{A}) |
| alt + ⇧ + a + A | option + ⇧ + a + A | inverted breve |
| alt + ´ + A | option + ´ + A | $\acute{A}$ (\acute{A}) |
| alt + @ + A | option + @ + A | $\mathring{A}$ (\mathring{A}) |
| **Dots** | | |
| . + . | . + . | … (\ldots ) |
| . + . + Tab | . + . + Tab | ⋯ (\cdots ) |
| . + . + Tab + Tab | . + . + Tab + Tab | high dots |
| . + . + Tab + Tab + Tab | . + . + Tab + Tab + Tab | ⋮ (\vdots ) |
| . + . + Tab + Tab + Tab + Tab | . + . + Tab + Tab + Tab + Tab | ⋱ (\ddots ) |
| . + . + Tab + Tab + Tab + Tab + Tab | . + . + Tab + Tab + Tab + Tab + Tab | back-diagonal dots |
| **Other Symbols** | | |
| < + = + tab | < + = + tab | $\leq$ (\leq) |
| > + = + tab | > + = + tab | $\geq$ (\geq) |
| = + \ | = + \ | $\neq$ (\neq) |
| < + < | < + < | $\ll$ (\ll) |
| > + > | > + > | $\gg$ (\gg) |
| ~ + ~ | ~ + ~ | $\approx$ (\approx) |
| = + tab | = + tab | $\asymp$ (\asymp) |
| < + tab | < + tab | $\prec$ (\prec) |
| < + tab + = + tab | < + tab + = + tab | $\preceq$ (\preceq) |
| > + tab | > + tab | $\succ$ (\succ) |

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| Windows / GNU/Linux | Mac | Equivalent in LaTeX |
|---|---|---|
| > + tab + = + tab | > + tab + = + tab | $\succeq$ (\succeq) |
| @ + @ + tab | @ + @ + tab | $\propto$ (\propto) |
| . + = | . + = | $\doteq$ (\doteq) |
| @ + tab | @ + tab | $\angle$ (\angle) |
| l + tab | l + tab | $\ell$ (\ell) |
| ⇧ + F5 + B | ⇧ + F5 + B | $\parallel$ (\parallel) |
| ~ + = | ~ + = | $\cong$ (\cong) |
| ~ + = + / | ~ + = + / | $\ncong$ (\ncong) |
| ~ | ~ | $\sim$ (\sim) |
| ~ + - | ~ + - | $\simeq$ (\simeq) |
| ~ + / | ~ + / | $\nsim$ (\nsim) |
| @ + + | @ + + | $\oplus$ (\oplus) |
| @ + - | @ + - | $\ominus$ (\ominus) |
| @ + . | @ + . | $\odot$ (\odot) |
| @ + * | @ + * | $\otimes$ (\otimes) |
| @ + / | @ + / | $\oslash$ (\oslash) |
| / + - + tab | / + - + tab | $\upharpoonright$ (\upharpoonright ) |
| . + tab | * + tab | $\cdot$ (\cdot) |
| + + - | + + - | $\pm$ (\pm) |
| - + + | - + + | $\mp$ (\mp) |
| * + tab | * + tab | $\times$ (\times) |
| / + tab | / + tab | $\div$ (\div) |
| * + tab | * + tab | $*$ (\ast) |
| d + tab | d + tab | $\partial$ (\partial ) |
| V + tab | V + tab | $\nabla$ (\nabla ) |
| @ | @ | $\circ$ (\circ) |
| * + tab | * + tab | $\star$ (\star ) |
| i + tab | i + tab | $\imath$ (\imath ) |

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| Windows / GNU/Linux | Mac | Equivalent in LaTeX |
|---|---|---|
| j + tab | j + tab | $\jmath$ (\jmath ) |
| h + tab | h + tab | $\hbar$ (\hbar ) |
| B + tab | B + tab | $\beth$ (\beth ) |
| G + tab | G + tab | $\gimel$ (\gimel ) |
| D + tab | D + tab | $\daleth$ (\daleth) |
| R + E | R + E | $\Re$ (\Re) |
| W + tab | W + tab | $\mho$ (\mho) |
| P + tab | P + tab | $\wp$ (\wp) |
| @ + @ | @ + @ | $\infty$ (\infty in LaTeX$) |
| T + tab | T + tab | $\top$ (\top ) |
| T + tab | T + tab | $\bot$ (\bot ) |
| < + > + tab | < + > + tab | $\clubsuit$ (\clubsuit ) |
| < + > + tab | < + > + tab | $\diamondsuit$ (\diamondsuit ) |
| < + > + tab | < + > + tab | $\heartsuit$ (\heartsuit ) |
| < + > + tab | < + > + tab | $\spadesuit$ (\spadesuit ) |
| b + tab | b + tab | $\flat$ (\flat ) |
| # + tab | # + tab | $\natural$ (\natural ) |
| # + tab | # + tab | $\sharp$ (\sharp ) |
| @ + = + tab | @ + = + tab | $\triangleq$ (\triangleq) |
| + + tab | + + tab | $\dagger$ (\dagger) |
| **Variable sized operators** | | |
| I + tab | I + tab | $\int$ (\int) |
| I + I + tab | I + I + tab | $\iint$ (\iint) |
| I + I + I + tab | I + I + I + tab | $\iiint$ (\iiint) |
| @ + I | @ + I | $\oint$ (\oint) |
| U + ⇧ + tab | U + ⇧ + tab | $\bigcup$ (\bigcup) |
| N + ⇧ + tab | N + ⇧ + tab | $\bigcap$ (\bigcap) |
| **Arrow** | | |

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| Windows / GNU/Linux | Mac | Equivalent in LaTeX |
|---|---|---|
| - + > | - + > | $\rightarrow$ (\rightarrow) |
| - + > + / | - + > + / | $\nrightarrow$ (\nrightarrow) |
| - + - + > | - + - + > | $\longrightarrow$ (\longrightarrow) |
| = + > | = + > | $\Rightarrow$ (\Rightarrow) |
| = + > + / | = + > + / | $\nRightarrow$ (\nRightarrow) |
| = + = + > | = + = + > | $\Longrightarrow$ (\Longrightarrow) |
| ~ + > | ~ + > | $\leadsto$ (\leadsto) |
| \| + - + > | \| + - + > | $\mapsto$ (\mapsto) |
| \| + - + - + > | \| + - + - + > | $\longmapsto$ (\longmapsto) |
| < + - | < + - | $\leftarrow$ (\leftarrow) |
| < + - + > | < + - + > | $\leftrightarrow$ (\leftrightarrow) |
| < + - + Tab | < + - + Tab | $\uparrow$ (\uparrow) |
| < + - + Tab + Tab | < + - + Tab + Tab | $\downarrow$ (\downarrow) |
| < + - + > + Tab | < + - + > + Tab | $\updownarrow$ (\updownarrow) |
| **Fences** | | |
| < + ⇧ + Tab | < + ⇧ + Tab | $\langle\rangle$ (\langle\rangle) |
| \| + . | \| + . | $\lfloor\rfloor$ (\lfloor \rfloor) |
| \| + ' | \| + ' | $\lceil\rceil$ (\lceil \rceil) |
| \| + \| | \| + \| | $\|\|$ (\| \|) |