Examples of how to use `shortex.sty`

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1 Brackets and bracket-like functions

You can specify a bracket size using $*$ for `\left` and `\right` or one of the standard size choices (`\big`, `\Big`, `\bigg`, `\Bigg`).

Description	Example	Text style	Display style
Round brackets (i.e., parentheses)	`\rbra{\frac{x}{y}}`	$(\frac{x}{y})$	$(\dfrac{x}{y})$
Curly brackets	`\cbra*{\frac{x}{y}}`	$\left\{\frac{x}{y}\right\}$	$\left\{\dfrac{x}{y}\right\}$
Square brackets	`\sbra[\bigg]{\frac{x}{y}}`	$\left[\frac{x}{y}\right]$	$\left[\dfrac{x}{y}\right]$

Many other bracket-like, semantic commands are also available:

Description	Example	Text style	Display style
Absolute value	`\abs{\frac{x}{y}}`	$\lvert\frac{x}{y}\rvert$	$\lvert\dfrac{x}{y}\rvert$
Set	`\set{\frac{x}{y}, \frac{y}{z}}`	$\{\frac{x}{y}, \frac{y}{z}\}$	$\{\dfrac{x}{y}, \dfrac{y}{z}\}$
Floor	`\floor{\frac{x}{y}}`	$\lfloor\frac{x}{y}\rfloor$	$\lfloor\dfrac{x}{y}\rfloor$
Ceiling	`\ceil{\frac{x}{y}}`	$\lceil\frac{x}{y}\rceil$	$\lceil\dfrac{x}{y}\rceil$
Norm	`\norm{\frac{x}{y}}`	$\lVert\frac{x}{y}\rVert$	$\lVert\dfrac{x}{y}\rVert$
Inner product	`\inner{\frac{x}{y}}{\frac{y}{z}}`	$\langle\frac{x}{y}, \frac{y}{z}\rangle$	$\langle\dfrac{x}{y}, \dfrac{y}{z}\rangle$
Cardinality	`\card{\whA}`	$\lvert\widehat{A}\rvert$	$\lvert\widehat{A}\rvert$

The norm and inner product commands also have versions with a subscript argument:

Description	Example	Text style	Display style
Norm with subscript	`\normsub*{\frac{x}{y}}{2}`	$\left\|\frac{x}{y}\right\|_2$	$\left\|\frac{x}{y}\right\|_2$
Inner product with subscript	`\innersub*{\frac{x}{y}}{z}{2}`	$\left\langle\frac{x}{y}, z\right\rangle_2$	$\left\langle\frac{x}{y}, z\right\rangle_2$

2 L_p Spaces and Operators

Description	Example	Text style	Display style
L_p space	`\Lp{2}`	L_2	L_2
L_p space for specified measure	`\Lpmeas{2}{\hmu}`	$L_2(\hat{\mu})$	$L_2(\hat{\mu})$
	`\Lpmeas[\Big]{2}{\hmu}`	$L_2\Big(\hat{\mu}\Big)$	$L_2\Big(\hat{\mu}\Big)$
L_p norm	`\Lpnorm{\hGamma}{2}`	$\|\hat{\Gamma}\|_{L_2}$	$\|\hat{\Gamma}\|_{L_2}$
	`\Lpnorm*{\hGamma}{2}`	$\left\|\hat{\Gamma}\right\|_{L_2}$	$\left\|\hat{\Gamma}\right\|_{L_2}$
L_p norm for specified measure	`\Lpmeasnorm{\hGamma}{2}{\hmu}`	$\|\hat{\Gamma}\|_{L_2(\hat{\mu})}$	$\|\hat{\Gamma}\|_{L_2(\hat{\mu})}$
	`\Lpmeasnorm[\Big]{\hGamma}{2}{\hmu}`	$\left\|\hat{\Gamma}\right\|_{L_2(\hat{\mu})}$	$\left\|\hat{\Gamma}\right\|_{L_2(\hat{\mu})}$
L_p inner product	`\Lpinner{\hGamma}{\Gamma}{2}`	$\langle\hat{\Gamma}, \Gamma\rangle_{L_2}$	$\langle\hat{\Gamma}, \Gamma\rangle_{L_2}$
	`\Lpinner*{\hGamma}{\Gamma}{2}`	$\left\langle\hat{\Gamma}, \Gamma\right\rangle_{L_2}$	$\left\langle\hat{\Gamma}, \Gamma\right\rangle_{L_2}$
L_p inner product for specified measure	`\Lpmeasinner{\hGamma}{\Gamma}{2}{\hmu}`	$\langle\hat{\Gamma}, \Gamma\rangle_{L_2(\hat{\mu})}$	$\langle\hat{\Gamma}, \Gamma\rangle_{L_2(\hat{\mu})}$
	`\Lpmeasinner[\big]{\hGamma}{\Gamma}{2}{\hmu}`	$\big\langle\hat{\Gamma}, \Gamma\big\rangle_{L_2(\hat{\mu})}$	$\big\langle\hat{\Gamma}, \Gamma\big\rangle_{L_2(\hat{\mu})}$

3 annotation commands

\barA	$\bar{A}$
\bara	$\bar{a}$
\bA	$\bar{A}$
\bB	$\bar{B}$
\balpha	$\bar{\alpha}$
\bGamma	$\bar{\Gamma}$
\mcA	$\mathcal{A}$
\hmcA	$\hat{\mathcal{A}}$
\mfA	$\mathfrak{A}$
\mfa	$\mathfrak{a}$
\bmfA	$\mathfrak{A}$
\bmfa	$\mathfrak{a}$
\hA	$\hat{A}$
\ha	$\hat{a}$
\halpha	$\hat{\alpha}$
\hGamma	$\hat{\Gamma}$
\bhA	$\hat{\mathbf{A}}$
\bha	$\hat{\mathbf{a}}$
\bhalpha	$\hat{\alpha}$
\bhGamma	$\hat{\mathbf{\Gamma}}$
\whA	$\widehat{A}$
\wha	$\widehat{a}$
\tdA	$\tilde{A}$
\tda	$\tilde{a}$
\tdalpha	$\tilde{\alpha}$
\tdGamma	$\tilde{\Gamma}$
\btdA	$\tilde{\mathbf{A}}$
\btda	$\tilde{\mathbf{a}}$
\btdalpha	$\tilde{\alpha}$
\btdGamma	$\tilde{\mathbf{\Gamma}}$
\biA	$\boldsymbol{A}$
\bia	$\boldsymbol{a}$
\bhiA	$\hat{\boldsymbol{A}}$
\bhia	$\hat{\boldsymbol{a}}$