The **bracket** package

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1 brackets

1.1 automatically sizable brackets

\lrparen{a}	(a)
\lrbrack{a}	$[a]$
\lrbrace{a}	$\{a\}$
\lrangle{a}	$\langle a \rangle$
\expval{a}	$\langle a \rangle$
\lrvert{a}	$\lvert a \rvert$
\abs{a}	$\lvert a \rvert$
\lrVert{a}	$\lVert a \rVert$
\norm{a}	$\lVert a \rVert$

1.2 manually sizable brackets

\lrparen*{a}	(a)
\lrparen[big]{a}	$\big(a\big)$
\lrparen[Big]{a}	$\Big(a\Big)$
\lrparen[bigg]{a}	$\bigg(a\bigg)$
\lrparen[Bigg]{a}	$\Bigg(a\Bigg)$

2 Dirac bra-ket notation

\bra{\frac{1}{2}} $\qquad\qquad\qquad\qquad\qquad\qquad\quad \left\langle\dfrac{1}{2}\right|$

\ket*{a} $\qquad\qquad\qquad\qquad\qquad\qquad\qquad\quad |a\rangle$

\ketbra{\frac{1}{2}}{\psi} $\qquad\qquad\qquad\qquad\qquad \left|\dfrac{1}{2}\right\rangle\!\left\langle\psi\right|$

\braket{\phi}{\psi} $\qquad\qquad\qquad\qquad\qquad\qquad \langle\phi|\psi\rangle$

\braket[bigg]{\frac{1}{2}}[\hat{O}]{\psi} $\qquad\qquad \left\langle\dfrac{1}{2}\middle|\hat{O}\middle|\psi\right\rangle$

3 set

\set{x\in\mathbb{C}}{0<\abs{x}<3} $\qquad \{x \in \mathbb{C} \mid 0 < |x| < 3\}$