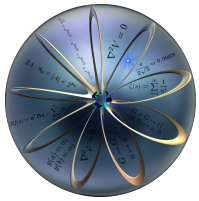

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self-adjoint operator

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Defines	Hermitian operator
Defines	symmetric operator
Defines	essentially self-adjoint
Defines	self-adjoint

A densely defined linear operator $A\colon \mathscr{D}(A) \subset \mathscr{H} \to \mathscr{H}$ on a Hilbert space $\mathscr{H}$ is a *Hermitian* or *symmetric* operator if $(Ax, y) = (x, Ay)$ for all $x, y \in \mathscr{D}(A)$. This means that the adjoint A^* of A is defined at least on $\mathscr{D}(A)$ and that its restriction to that set coincides with A. This fact is often denoted by $A \subset A^*$.

The operator A is *self-adjoint* if it coincides with its adjoint, i.e. if $A = A^*$. If A is closable and its closure coincides with its adjoint (i.e. $\overline{A} = A^*$), then A is said to be *essentially self-adjoint*.