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Notation

$:=$, $=:$, **??**, the right-hand part is a definition of the left-hand part; vice versa
C^∞, 1, the space of smooth functions
$\mathcal{D}$, 2, the space of compactly supported smooth functions
$\mathcal{S}$, 2, the Schwartz space
L^2, 2, the space of functions with integrable square
$\mathcal{D}'$, 3, the space of distributions
$\ll \cdot, \cdot \gg$, 3, pairing of a distribution and a test function.
$\delta(x)$, 3, delta-function
$\mathcal{S}'$, 3, the space of tempered distributions
ℓ_2, 3, the space of sequences, satisfying $\sum x_j^2 < \infty$
$\mathcal{F}$, $\widehat{g}$, 5, 406, the Fourier transform.
$\otimes$, 6, a tensor product
1, 1_n, 7, the unit matrix
A^t, 7, transposed matrix
$\overline{A}$, 7, complex conjugate matrix
A^*, 7, adjoint matrix
$\mathrm{Mat}(p,q)$, $\mathrm{Mat}(n)$, 7, the space of matrices
$\mathrm{Symm}(n)$, $\mathrm{ASymm}(n)$, $\mathrm{Herm}(n)$, $\mathrm{AHerm}(n)$, 7, the spaces of symmetric, skew-symmetric, Hermitian, anti-Hermitian matrices
$A > 0$, 7, a positive definite matrix
$\mathrm{Heis}_n(\mathbb{R})$ etc., 11, **??**, 407, **??**, the Heisenberg group
$[\cdot,\cdot]$, 16, 434, a commutator, $[A,B] = AB - BA$,
$b[\cdot]$, 17, 239,240, Gaussian vectors
$B[\cdot]$, 19, also 40, 240, Gaussian operators
$\mathrm{Mor}(\cdot, cdot)$, 24, a set of morphisms of a category
$\mathrm{End}(\cdot)$, 25, semigroups of endomorphisms
$\mathrm{Aut}(\cdot)$, 25, groups of automorphisms
$\mathcal{V}_{2n}$, 26, the standard symplectic space
$\widehat{a}(v)$, 16, **??**,
$P^{\perp\Lambda}$, 27, orthogonal complement
$P : V \rightrightarrows W$, 33, a linear relation
$\mathrm{graph}(\cdot)$, 33, graph of an operator
$\ker(\cdot)$, 34, 52, the kernel of a linear relation, of a form
$\mathrm{im}(\cdot)$, 34, the image of a linear relation
$\mathrm{dom}(\cdot)$, 34, domain of definiteness
$\mathrm{indef}(\cdot)$, 34, indefiniteness of a linear relation
$\Lambda^\ominus$, 39,