Permutator: $\mathfrak{P}$ (#3)
Exchange: $\mathfrak{E}\psi(x_1, x_2) = \psi(x_2, x_1)$
Probability (mass): $\mathfrak{:}\mathrm{P}\mathfrak{:}$
Probability density: $\mathfrak{:}\mathrm{d}\mathfrak{:}$
Probability current density: $\mathfrak{:}\vec{\mathrm{j}}\mathfrak{:} := \psi\vec{\nabla}\bar{\psi} - \bar{\psi}\vec{\nabla}\psi$
Kronecker's delta function: $\delta^{\mathrm{K}}_{ij} = \begin{cases} 1 & \text{if } i = j \\ 0 & \text{otherwise} \end{cases}$
Dirac's delta function: $\delta^{\mathrm{D}}_a(x) = \delta^{\mathrm{D}}(x - a)$
Euler's Gamma function: $\Gamma^{\mathrm{e}}(x) = \int t^x e^{-t} \mathrm{d}t$
Parity operator: $\mathfrak{P}\psi(x) = \psi(-x)$
"Defined as": $:=$ $=:$