

$\mathbb{E} /: \mathbb{E}[L1_, Q1_, P1_] \equiv \mathbb{E}[L2_, Q2_, P2_] :=$

$CF[L1 == L2] \wedge CF[Q1 == Q2] \wedge CF[Normal[P1 - P2] == 0];$

$\mathbb{E} /: \mathbb{E}[L1_, Q1_, P1_] \times \mathbb{E}[L2_, Q2_, P2_] := \mathbb{E}[L1 + L2, Q1 + Q2, P1 * P2];$

$\mathbb{E}[L_, Q_, P_]_{\$k_} := \mathbb{E}[L, Q, Series[Normal@P, {\epsilon, 0, \$k}]];$