

LZip _{$\mathcal{L}S_List, simp_@$} $\mathbb{E}[L_ , Q_ , P_] :=$

Module [{ \mathcal{L} , z , zs , c , ys , ηs , lt , $zrule$, $L1$, $L2$, $Q1$, $Q2$ },

$zs = \text{Table}[\mathcal{L}^*, \{\mathcal{L}, \mathcal{L}S\}];$

$c = L /. \text{Alternatives} @@ (\mathcal{L}S \cup zs) \rightarrow \emptyset;$

$ys = \text{Table}[\partial_{\mathcal{L}} (L /. \text{Alternatives} @@ zs \rightarrow \emptyset), \{\mathcal{L}, \mathcal{L}S\}];$

$\eta s = \text{Table}[\partial_z (L /. \text{Alternatives} @@ \mathcal{L}S \rightarrow \emptyset), \{z, zs\}];$

$lt = \text{Inverse}@\text{Table}[K\delta_{z, \mathcal{L}^*} - \partial_{z, \mathcal{L}} L, \{\mathcal{L}, \mathcal{L}S\}, \{z, zs\}];$

$zrule = \text{Thread}[zs \rightarrow lt. (zs + ys)];$

$L2 = (L1 = c + \eta s.zs /. zrule) /. \text{Alternatives} @@ zs \rightarrow \emptyset;$

$Q2 = (Q1 = Q /. T2t /. zrule) /. \text{Alternatives} @@ zs \rightarrow \emptyset;$

$simp /@$

$\mathbb{E}[L2, Q2, \text{Det}[lt]] e^{-L2-Q2}$

$\text{Zip}_{\mathcal{L}S} [e^{L1+Q1} (P /. T2t /. zrule)] // . t2T];$

LZip _{$\mathcal{L}S_List$} := **LZip** _{$\mathcal{L}S, CF$} ;