

```

QZip $\zeta_S$ _List, simp_ @ $\mathbb{E}$  [L_, Q_, P_] :=
Module [ { $\zeta$ , z, zs, c, ys,  $\eta_S$ , qt, zrule, Q1, Q2},
  zs = Table [ $\zeta^*$ , { $\zeta$ ,  $\zeta_S$ }];
  c = Q /. Alternatives @@ ( $\zeta_S \cup zs$ )  $\rightarrow$  0;
  ys = Table [ $\partial_{\zeta}$  (Q /. Alternatives @@ zs  $\rightarrow$  0), { $\zeta$ ,  $\zeta_S$ }];
   $\eta_S$  = Table [ $\partial_z$  (Q /. Alternatives @@  $\zeta_S \rightarrow$  0), {z, zs}];
  qt = Inverse@Table [K $\delta_{z, \zeta^*} - \partial_{z, \zeta} Q$ , { $\zeta$ ,  $\zeta_S$ }, {z, zs}];
  zrule = Thread [zs  $\rightarrow$  qt . (zs + ys)];
  Q2 = (Q1 = c +  $\eta_S$  . zs /. zrule) /. Alternatives @@ zs  $\rightarrow$  0;
  simp /@  $\mathbb{E}$  [L, Q2, Det [qt] e-Q2 Zip $\zeta_S$  [eQ1 (P /. zrule)]]];
QZip $\zeta_S$ _List := QZip $\zeta_S$ , CF;

```