\[
\sum \frac{\delta F}{\delta \xi} = \sum \frac{\delta F}{\delta \eta} = \frac{\partial F}{\partial \xi} = \frac{\partial F}{\partial \eta}
\]

\[
= \sum \frac{\partial (\xi, \eta)}{\partial (\eta, \xi)} = \sum \left| \begin{array}{ccc}
\frac{\partial \eta}{\partial \xi} & \frac{\partial \eta}{\partial \xi} & \frac{\partial \eta}{\partial \xi} \\
\frac{\partial \eta}{\partial \eta} & \frac{\partial \eta}{\partial \eta} & \frac{\partial \eta}{\partial \eta} \\
\frac{\partial \eta}{\partial \xi} & \frac{\partial \eta}{\partial \xi} & \frac{\partial \eta}{\partial \xi}
\end{array} \right| = \sum \frac{\partial (\xi, \eta)}{\partial (\eta, \xi)}
\]