

$$\begin{array}{c}
 \begin{array}{c}
 \text{hyp} \qquad \qquad \text{hyp} \\
 \begin{array}{c}
 G \wedge F, \\
 F \wedge G, \vdash F \wedge G \\
 E \rightarrow F \wedge G
 \end{array}
 \qquad
 \begin{array}{c}
 G \wedge F, \\
 F \wedge G, \vdash E \rightarrow F \wedge G \\
 E \rightarrow F \wedge G
 \end{array}
 \end{array}
 \\
 \hline
 \wedge \text{ intro} \\
 \begin{array}{c}
 G \wedge F, \\
 F \wedge G, \vdash (F \wedge G) \wedge (E \rightarrow F \wedge G) \\
 E \rightarrow F \wedge G
 \end{array}
 \\
 \hline
 \text{cut} \\
 \begin{array}{c}
 G \wedge F \vdash F \wedge G \qquad \qquad \begin{array}{c} G \wedge F, \\ F \wedge G \end{array} \vdash (F \wedge G) \wedge (E \rightarrow F \wedge G) \\
 \hline
 \text{cut} \\
 G \wedge F \vdash (F \wedge G) \wedge (E \rightarrow F \wedge G)
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