

## consequent intro

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The *consequent intro* command forms a single consequent from the selected declarations, antecedents and consequents. The result appears as the first consequent in the sub-goal, in which consequents are disjoined, antecedents are conjoined, and declarations are universally quantified. In other respects, the order in which the formulae are selected is maintained in the result.

The following examples illustrate some common cases.

$$\begin{array}{ll}
 | p_1, p_2 \vdash? & \Longrightarrow \vdash? \neg (p_1 \wedge p_2) \\
 \vdash? p_2, p_1 & \Longrightarrow \vdash? p_2 \vee p_1 \\
 | p_1, p_2 \vdash? p_3, p_4 & \Longrightarrow \vdash? p_1 \wedge p_2 \Rightarrow p_3 \vee p_4 \\
 d_1; d_2 \mid p_1, p_2 \vdash? p_3, p_4 & \Longrightarrow \vdash? \forall d_1; d_2 \mid p_1 \wedge p_2 \bullet p_3 \vee p_4 \\
 d_1; d_2 \mid p_1, p_2 \vdash? & \Longrightarrow \vdash? \forall d_1; d_2 \mid p_1 \wedge p_2 \bullet false \\
 d_1; d_2 \vdash? p_1, p_2 & \Longrightarrow \vdash? \forall d_1; d_2 \bullet p_1 \vee p_2 \\
 d_1; d_2 \vdash? & \Longrightarrow \vdash? \forall d_1; d_2 \bullet false \\
 d_1; d_3 \dagger d_2 \vdash? & \Longrightarrow \vdash? \forall d_1; d_3 \bullet \forall d_2 \bullet false
 \end{array}$$

Any antecedent or consequent may be selected multiple times, but declarations may each be selected only once. If no declarations are selected, the original occurrences of the antecedents and consequents do not appear in the sub-goal.

The *consequent intro* command can also be applied to an entire goal, in which case it creates a sub-goal in which there is just one consequent combining all the notation of the original goal.

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# 1. Tactic example

*“consequent intro”*  $p_1$   $p_2$

This example applies the *consequentintro* command to the antecedents or consequents  $p_1$  and  $p_2$ .

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