

Procedure for the derivation worksheet

Enter any premises of the argument as initial assumptions, enter its conclusion as a goal, and follow the procedure below until you are done.

1. *Find any open gaps.*

- If there aren't any, you've shown that the initial argument is valid and you're done.
- If there are any, pick one to work on, and go on to step 2.

2. *Note the proximate argument of the gap.* That is, write down the gap's active resources and goal.

- Go on to step 3.

3. *Find any rules that can be used to close the gap.* Write the name of each such rule under the conclusion of the proximate argument.

<i>conditions for closing the gap</i>	<i>rule</i>
the goal is among the resources	QED
the goal is \perp , and there are resources φ and $\neg \varphi$	Nc
the goal is \top	ENV
\perp is a resource	EFQ

- If there aren't any, go on to step 4.
- If there are any, pick one, use it to close the gap, and go back to step 1.

4. *Find any rules that can be used to exploit resources or plan for the goal.*

Write the name of each such rule under the sentence in the proximate argument it exploits or plans for.

<i>kind of sentence</i>	<i>exploitation rule</i>	<i>planning rule</i>
conjunction	Ext	Cnj
negated {	<i>none</i>	RAA
atomic sentence	CR (when the goal is \perp)	
non-atomic sent.		
atomic sentence	<i>none</i>	IP
\top or \perp	<i>none</i>	<i>none</i>

- If there aren't any, you've reached a dead-end open gap, so you've shown that the initial argument is not valid, and you're done.
- If there are any, pick one, apply it, and go back to step 1.