

Opgave 5.31(g) $p \wedge (q \vee r) \vdash (p \wedge q) \vee (p \wedge r)$

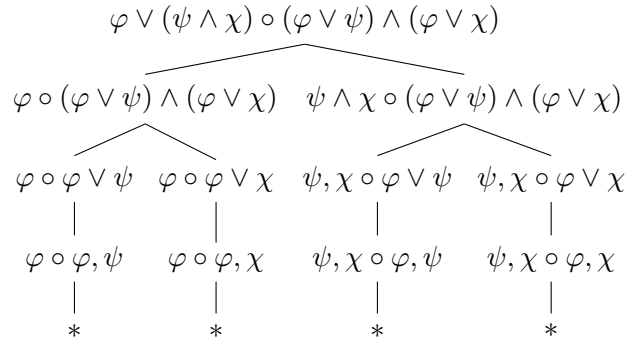
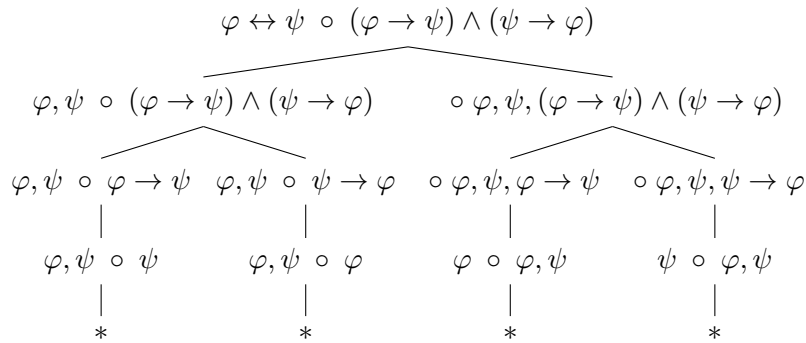
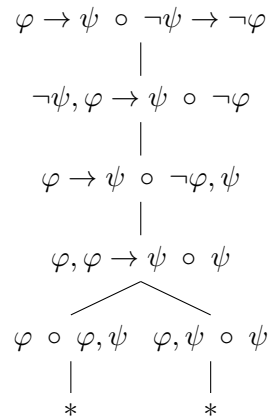
1	$p \wedge (q \vee r)$	ass
2	p	$\wedge E, 1$
3	$(q \vee r)$	$\wedge E, 1$
4	q	ass
5	$(p \wedge q)$	$\wedge I, 2, 4$
6	$(p \wedge q) \vee (q \vee r)$	$\vee I, 5$
7	r	ass
8	$(p \wedge r)$	$\wedge I, 2, 7$
9	$(p \wedge q) \vee (q \vee r)$	$\vee I, 8$
10	$(p \wedge q) \vee (q \vee r)$	$\vee I, 1, 6, 9$

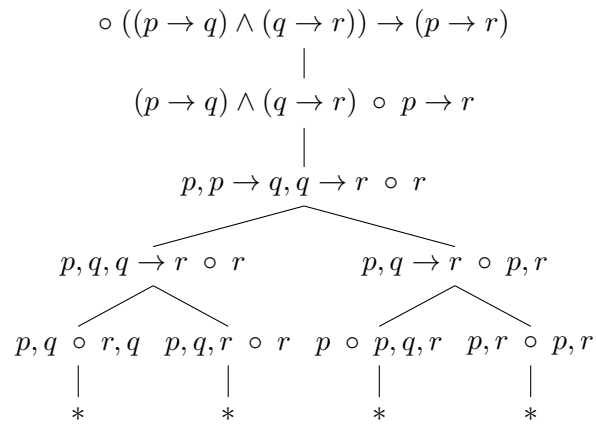
Opgave 5.32(2) $p \wedge (q \wedge r) \vdash r \wedge p$

1	$p \wedge (q \wedge r)$	ass
2	p	$\wedge E, 1$
3	$(q \wedge r)$	$\wedge E, 1$
4	r	$\wedge E, 3$
5	$(r \wedge p)$	$\wedge I, 2, 4$

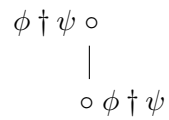
(3) $p \rightarrow (q \wedge r), q \rightarrow s, p \vdash s$

1	$p \rightarrow (q \wedge r)$	ass
2	$q \rightarrow s$	ass
3	p	ass
4	$(q \wedge r)$	$\Rightarrow E, 1, 3$
5	q	$\wedge E, 4$
6	s	$\Rightarrow E, 2, 5$

Opgave 5.33(2) $\varphi \vee (\psi \wedge \chi); (\varphi \vee \psi) \wedge (\varphi \vee \chi)$ **Opgave 5.37**(2) $\varphi \leftrightarrow \psi; (\varphi \rightarrow \psi) \wedge (\psi \rightarrow \varphi)$ (3) $\varphi \rightarrow \psi; \neg\psi \rightarrow \neg\varphi$ 

Opgave 5.38(3) $((p \rightarrow q) \wedge (q \rightarrow r)) \rightarrow (p \rightarrow r)$ **Opgave 5.53**Geef de semantische tableauregels voor de Quine dolk \dagger .

- \dagger - links



- \dagger - rechts

