$$
\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{}{\vdash\ p^{\perp} \Downarrow\ [\cdot][1:p]\cdot;\cdot}\ \mathtt{I}}{\vdash\ \ [\cdot][1:p]\cdot;\cdot//^{1} \vdash\ \ [\cdot][\cdot]p^{\perp};\cdot}\ 4}{\vdash\ \ [\cdot][1:p]\cdot;\cdot//^{1} \vdash\ \ [\cdot][\cdot]\cdot;p^{\perp}}\ *}{\vdash\ !^{1}p^{\perp} \Downarrow\ [\cdot][1:p]\cdot;\cdot}\ !
\qquad
\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{}{\vdash\ q^{\perp} \Downarrow\ [\cdot][2:q]\cdot;\cdot}\ \mathtt{I}}{\vdash\ \ [\cdot][2:q]\cdot;\cdot//^{2} \vdash\ \ [\cdot][\cdot]q^{\perp};\cdot}\ 4}{\vdash\ \ [\cdot][2:q]\cdot;\cdot//^{2} \vdash\ \ [\cdot][\cdot]\cdot;q^{\perp}}\ *}{\vdash\ !^{2}q^{\perp} \Downarrow\ [\cdot][2:q]\cdot;\cdot}\ !
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\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{}{\vdash\ r^{\perp} \Downarrow\ [\cdot][3:r]\cdot;\cdot}\ \mathtt{I}}{\vdash\ \ [\cdot][3:r]\cdot;\cdot//^{3} \vdash\ \ [\cdot][\cdot]r^{\perp};\cdot}\ 4}{\vdash\ \ [\cdot][3:r]\cdot;\cdot//^{3} \vdash\ \ [\cdot][\cdot]\cdot;r^{\perp}}\ *}{\vdash\ !^{3}r^{\perp} \Downarrow\ [\cdot][3:r]\cdot;\cdot}\ !
\qquad
\dfrac{}{\vdash\ \mathbf{1} \Downarrow\ [\cdot][\cdot]\cdot;\cdot}\ \mathbf{1}}{\vdash\ !^{3}r^{\perp} \otimes \mathbf{1} \Downarrow\ [\cdot][3:r]\cdot;\cdot}\ \otimes}{\vdash\ !^{2}q^{\perp} \otimes !^{3}r^{\perp} \otimes \mathbf{1} \Downarrow\ [\cdot][2:q,3:r]\cdot;\cdot}\ \otimes}{\vdash\ !^{1}p^{\perp} \otimes !^{2}q^{\perp} \otimes !^{3}r^{\perp} \otimes \mathbf{1} \Downarrow\ [\cdot][1:p,2:q,3:r]\cdot;\cdot}\ *}{\vdash\ \ [\cdot][\cdot]\cdot;!^{1}p^{\perp} \otimes !^{2}q^{\perp} \otimes !^{3}r^{\perp} \otimes \mathbf{1}, ?^{1}p, ?^{2}q, ?^{3}r}\ *
$$