

$$\begin{array}{ccccccc}
& & wQgQRfR & \longrightarrow & wgQRfR & \xrightarrow{\beta} & kvQRfR & \longrightarrow & kRvQRfR \\
& \swarrow \sim & \uparrow \sim & & \uparrow \sim & & \uparrow \sim & & \uparrow \sim \\
& & wQgRfR & & wQgQfR & \longrightarrow & wgQfR & \xrightarrow{\beta} & kvQfR & \longrightarrow & kRvQfR \\
& \swarrow \sim & \uparrow \sim & & \uparrow \sim & & \uparrow \sim & & \uparrow \sim & & \uparrow \sim \\
\mathbf{L}w \circ \mathbf{R}(gf) = wQgfR & & wQgQfQR & \longrightarrow & wgQfQR & \xrightarrow{\beta} & kvQfQR & \longrightarrow & kRvQfQR \\
& \swarrow \sim & \uparrow \sim & & \uparrow \sim & & \uparrow \sim & & \uparrow \sim & & \uparrow \sim \\
& & wQgfQR & \longrightarrow & wgfQR & \xrightarrow{\beta} & kvfQR & \longrightarrow & kRvfQR \\
& & & & & & \downarrow \alpha & & \downarrow \alpha \\
& & & & & & khuQR & \longrightarrow & kRhuQR \\
& & & & & & \downarrow & & \downarrow \\
& & & & & & khRuQR & \xrightarrow{\sim} & kRhRuQR \\
& & & & & & \uparrow \sim & & \uparrow \sim \\
& & & & & & khRuQ & \xrightarrow{\sim} & kRhRuQ = \mathbf{R}k \circ \mathbf{R}h \circ \mathbf{L}u
\end{array}$$