

$$\begin{array}{ccccc}
F(x) & \xrightarrow{F(\eta_{K_1(\Gamma_1(x))})} & F(K_1(\Gamma_1(x))) & \xrightarrow{F(K_1(\eta_{K_2\Gamma_2})\Gamma_1)} & F(K_1(K_2(\Gamma_2(\Gamma_1(x))))) \\
\searrow \varphi_x & & \nearrow \psi_{\Gamma_1(x)} & & \uparrow \psi_{K_2(\Gamma_2(\Gamma_1(x)))} \\
& G(\Gamma_1(x)) & \xrightarrow{G(\eta_{K_2\Gamma_2}(\Gamma_1(x)))} & G(K_2(\Gamma_2(\Gamma_1(x)))) & \\
& \searrow \varphi'_{\Gamma_1(x)} & & \nearrow \psi'_{\Gamma_2(\Gamma_1(x))} & \\
& & H(\Gamma_2(\Gamma_1(x))) & &
\end{array}$$