

$$\begin{array}{ccccccc}
 X & \xrightarrow[\textcolor{blue}{i}]{\text{TCofib}} & Y & \longrightarrow & S & \longrightarrow & \\
 \parallel & & \downarrow \textcolor{blue}{\text{Cofib}} & & \downarrow & & \\
 \textcolor{red}{X} & \xrightarrow{\textcolor{red}{\phantom{i}}} & V_Y & \xrightarrow{\textcolor{red}{\phantom{i}}} & \textcolor{red}{E} & \xrightarrow{\textcolor{red}{\delta_X}} & \\
 & & \downarrow & & \downarrow \lambda & & \\
 & & U_Y & = & U_Y & & \\
 & & \downarrow \textcolor{blue}{\delta_Y} & & \downarrow & & 
 \end{array}$$

$$\begin{array}{ccccccc}
 \textcolor{red}{X} & \xrightarrow{\textcolor{red}{\phantom{i}}} & V_Y & \xrightarrow{\textcolor{red}{\phantom{i}}} & \textcolor{red}{E} & \xrightarrow{\textcolor{red}{\delta_X}} & \\
 \downarrow i & & \parallel 1_{V_Y} & & \downarrow \lambda & & \\
 Y & \xrightarrow{\phantom{i}} & V_Y & \xrightarrow{\phantom{i}} & U_Y & \xrightarrow{\delta_Y} & 
 \end{array}$$