

$$\begin{array}{ccc}
 x & \xrightarrow{U(x)} & x \\
 \text{id} \downarrow & \Downarrow b & \downarrow f \\
 x & \xrightarrow{f'} & y \\
 f \downarrow & \Downarrow a & \downarrow \text{id} \\
 y & \xrightarrow{U(y)} & y
 \end{array}
 =
 \begin{array}{ccc}
 x & \xrightarrow{U(x)} & x \\
 f \downarrow & \Downarrow U(f) & \downarrow f \\
 y & \xrightarrow{U(y)} & y
 \end{array}$$

$$\begin{array}{ccccc}
 x & \xrightarrow{U(x)} & x & \xrightarrow{f'} & y \\
 \text{id} \downarrow & \Downarrow b & f \downarrow & \Downarrow a & \downarrow \text{id} \\
 x & \xrightarrow{f'} & y & \xrightarrow{U(y)} & y
 \end{array}
 =
 \begin{array}{ccc}
 x & \xrightarrow{f'} & y \\
 \text{id} \downarrow & \Downarrow \text{id}_{f'} & \downarrow \text{id} \\
 x & \xrightarrow{f'} & y
 \end{array}$$