

$$\begin{array}{ccccc}
 r_1 & X & \hookrightarrow & X' & \longrightarrow \twoheadrightarrow X \\
 & \downarrow f & & \downarrow f' & \\
 r_2 & Y & \hookrightarrow & Y' & \longrightarrow \twoheadrightarrow Y
 \end{array}$$