

## 0.1 Pullbacks and Pushins

Pullbacks capture the idea of equality of arrows in Category Theory

$$\begin{array}{ccc}
 A \times_X B & \xrightarrow{\pi_2} & B \\
 \downarrow \pi_1 & & \downarrow g \\
 A & \xrightarrow{f} & X
 \end{array}$$

Pullback of arrows shown is the same as their product in the slice category  $C/X$