Exercise 2. If f is iso, so is f^{-1}.

Proof. An arrow $a \xrightarrow{F} b$ is iso iff there exists an arrow $b \xrightarrow{G} a$ such that

$$F \circ G = \mathbf{1}_b \quad G \circ F = \mathbf{1}_a \tag{1}$$

For $a \xrightarrow{f} b$ an iso arrow, the above equations are satisfied if we set $F = f$ and $G = f^{-1}$. But they are also satisfied if we set $F = f^{-1}$ and $G = f$, so that f^{-1} is an iso arrow $b \to a$ with f as its inverse.

□