Equivalence

Definition

Let $\mathcal{C}$ and $\mathcal{D}$ be categories. If one has functors

$$F : \mathcal{C} \to \mathcal{D}$$
$$G : \mathcal{D} \to \mathcal{C}$$

together with natural transformations

$$F \circ G \xrightarrow{\sim} 1_{\mathcal{D}}$$
$$G \circ F \xrightarrow{\sim} 1_{\mathcal{C}},$$

then we say $\mathcal{C}$ and $\mathcal{D}$ are equivalent as categories.

Question

In the definition of an equivalence between two categories, what happens if you replace natural transformations with equality?