called a semigroup isomorphism if there exists a morphism of semigroups $G: \mathbf{T} \rightarrow$

S such that

ch that
$$F : G = Id_G$$

$$F : G = Id_{\mathbf{S}}$$
 and $G : F = Id_{\mathbf{T}}$.

Definition (Semigroup isomorphism). A morphism of semigroups $F: \mathbf{S} \to \mathbf{T}$ is

$$G$$
 :

$$G$$
 $\stackrel{\circ}{\cdot}$