

Each of the functions in Activity 28.1 are structure preserving and are therefore homomorphisms. More specifically, the first function is a monomorphism and the second function is an epimorphism. The last function is neither injective nor surjective and so it is simply a homomorphism. The set containing all homomorphisms also contains all monomorphisms and epimorphisms. The intersection of the the set containing all monomorphisms and the set containing all epimorphisms is the set containing all isomorphisms.