

## **Answer on Question #60414 – Math – Abstract Algebra**

### **Question**

What is a difference between homomorphism and homeomorphism?

### **Solution**

A homomorphism is a mapping in algebra, while a homeomorphism is a mapping in topology.

A homomorphism is a mapping between two algebraic systems which preserve algebraic structure. It is not necessary bijection (one-to-one and onto).

We say that homomorphic structures are "similar".

A homeomorphism is a bijective and continuous mapping in topology, its inverse is also continuous. In topology "homeomorphic" means "the same".