

## Lecture 1 on Sept.05 2013

In this lecture, we have introduced the basic arithmetic operations related to the complex numbers. They are addition, multiplication, quotient, square roots, real and imaginary parts of a complex number, conjugate and absolute value for a given complex number. Finally two important inequalities are shown. One is triangle inequality and another one is the famous Cauchy's inequality. In fact, the current lecture is about the algebra of the complex number field. In the coming lecture, we are going to study its geometric representation. Riemann sphere will be taught with some applications.