In this presentation, we will discuss multiplication algorithms that can be applied to solve problems in applied fields such as Cryptography. The Schoolbook method to multiply two $n$ terms polynomials takes $n^2$ — steps, which is quadratic in input size. We will talk about faster methods like Karatsuba’s algorithm $[n^{\log_3(2)}] — steps$ and Toom-3 algorithm $[n^{\log_3(5)}] — steps$ and their applications. (Received September 16, 2019)