A perfect number is a natural number N such that the sum of its positive divisors (including N) of N equals 2N, denoted by \( \sigma(N) = 2N \). From the work of Euclid and Euler, it is known that an even natural number N is perfect if and only if there is a natural number p such that \((2^p - 1)\) is a prime and \(N = (2^p - 1)2^{(p-1)}\). Today, there are about 47 known even perfect numbers. Euler proved that for an odd perfect number N, there is a prime p = 1 (mod 4) such that \(N = (p^m)(q^2)\) with \(m = 1\) (mod 4) and gcd(p, q) = 1. However, it is an unsolved problem in number theory whether there are any odd perfect numbers. In 1991, Brent, Cohen, and te Riele proved that odd perfect numbers are greater than \(10^{300}\). In 2012, Ochem and Rao modified their method to show that odd perfect numbers are greater than \(10^{1500}\). Some recent results on odd perfect numbers will be discussed in this presentation. (Received September 26, 2012)