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We present some results of our research work on the problem of the Infinity of Twin Primes and Generalizations. Last year, Yitang Zhang proved that there are infinitely many primes that are apart by less than 70,000,000. Zhang's work has given strong impetus to research efforts aimed at narrowing this gap. Our goal is to remedy the deficiencies of the existing algorithms for prime number generation and to improve their of the $O(n^{**4}/\log n)$ performance. Our work examines the distributions of Cousin Primes and Sexy Primes, in addition to distribution of Twin Primes. The generation primes is important in the use of most public-key schemes, for the creation of key pairs and in the computation stage of many cryptographic setups. This research also has potential application in developing fast factoring algorithms. (Received February 11, 2014)