

Introduction

A prime number is an integer greater than 1 which is divisible only by 1 and by itself. The first two prime numbers are 2 and 3. Since 2 is the only even number which is a prime, the pair (2, 3) is the only pair of consecutive numbers that are both primes. On the other hand, there are many pairs of primes that differ by 2:

$$(3, 5), (5, 7), (11, 13), (17, 19), (29, 31), \dots$$

If (p, q) is such a pair, i.e. if p, q are primes such that $q = p + 2$ then we say that p and q are *twin primes*. Even though twin primes have been studied for a long time there are still many basic questions concerning them that are unanswered. It is now even known if the number of twin primes is finite or infinite.

The goal of this report is to research some properties of twin primes. Our main focus will be on the question how many twin primes (p, q) there are such that $p, q \leq n$ for a given number n , and how this number of twin primes changes as we change n .