

The smallest prime such that replacing each digit d with d copies of the digit d produces a different prime (3331).

There are 31 milligrams of cholesterol in a tablespoon of butter.

The only known Mersenne emirp.

The speed limit in downtown Trenton, a small city in northwestern Tennessee, is 31 miles per hour.



31 letters of the Russian alphabet are pronounceable.

$3 + 5 + 7 + 11 + \dots + 89 = 31^2$, and the sum of the first 31 odd primes is a prime square.

The sum of digits of the 31st Fibonacci number is 31. [Gupta]

The big “31” sign made its debut at all Baskin-Robbins stores in 1953, offering customers a different ice cream for every day of the month. Note that 31 is the largest prime factor of 1953. [Coneglan]

The first U.S. space satellite (Explorer-I) weighed just less than 31 pounds and was launched on Jan 31, 1958. The high-power transmitter worked for 31 days. [McCranie]

31 and the 31st prime are both Mersenne primes. [Wu]

The smallest prime that is a **generalized repunit** in three different bases. [Rupinski]

The smallest prime that can be represented as the sum of two triangular numbers in two different ways ($21 + 10$ and $28 + 3$). [Gupta]

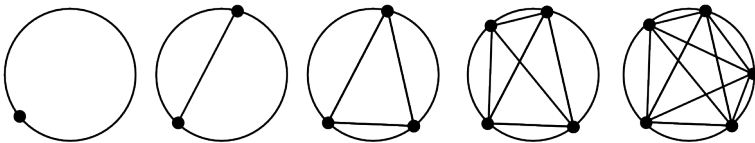


Figure 14. Moser’s Circle Problem

Moser’s circle problem asks to determine the most pieces into which a circle is divided if n points on its circumference are joined by chords with no three internally concurrent. The first few values are 1, 2, 4,