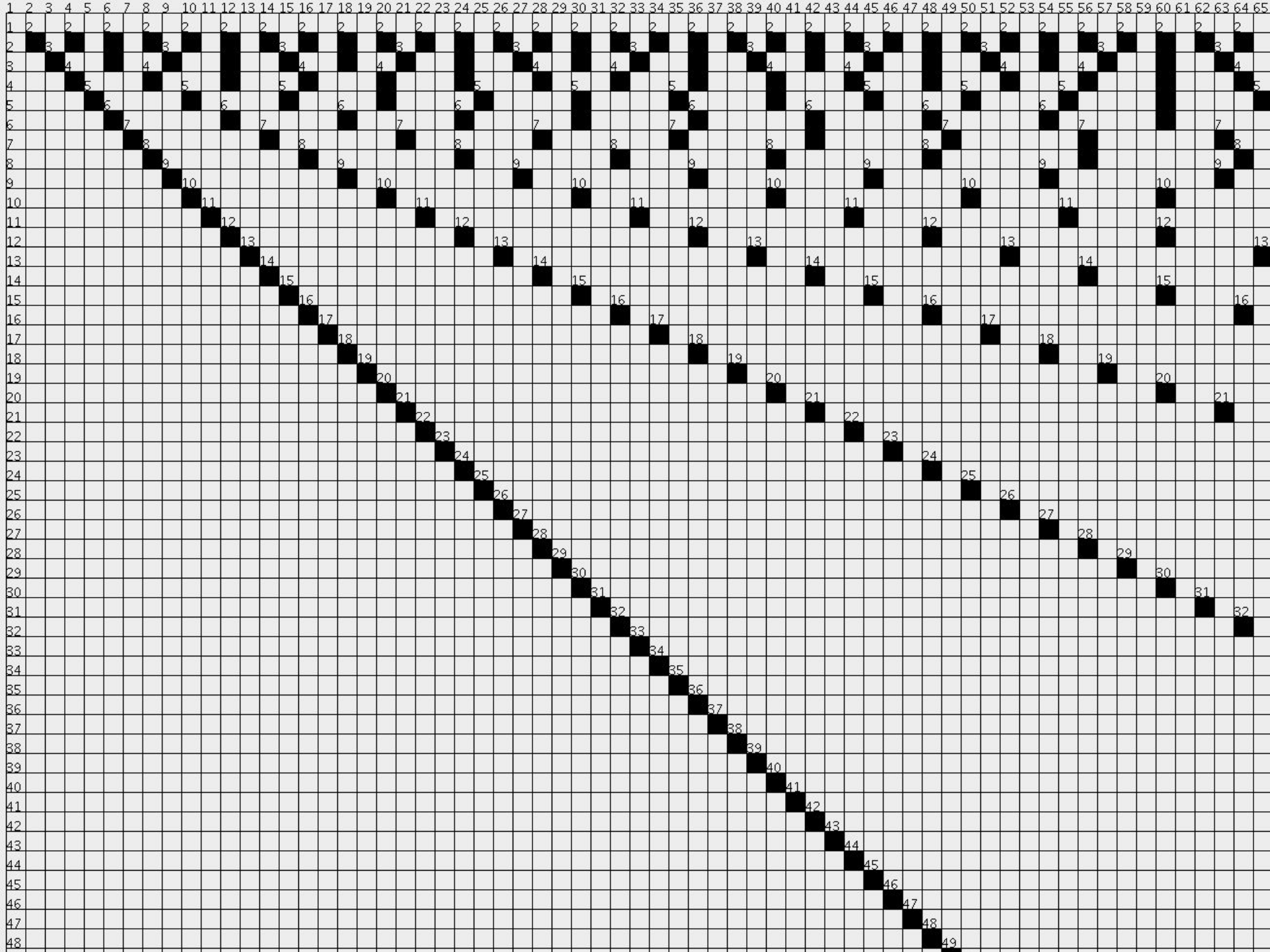
Primes

In their prime...
The atoms of mathematics

Significance

Primes are extant and consistent across all bases, and they exist outside of number systems

Ultimate divisors of all numbers - any number can be expressed as the multiplication of a unique set of primes (fundamental theorem of arithmetic)



Many types of primes

-Twin primes
-Mersenne prime
-Euclid number
-Many more patterns have been declared

DICKS

I developed an algorithm to efficiently generate primes

Similar Algorithm - http://en.wikipedia.org/wiki/File:Sieve_of_Eratosthenes_animation.gif

Aidian twins

I found a property of some consecutive primes, a,b such that 2a+b and 2b+a are prime.

It has yet to be proven that there exists an infinite number of Aidian twins

What's been done, and what has yet to be

We know the probability that a randomly chosen number is prime (given an inverse proportion to its number of digits or its natural logarithm)

Many formulas exist for the generation of some prime numbers, but none exist that can produce all and only primes

As of 2011, the largest known prime has 13 million digits