Comp 110L Putnam

Project 5: BigIntegers

1. **A prime number is called a Mersenne Prime if it can be written in the form $2^p - 1$ for some prime integer p. Write a program that finds all Mersenne Primes with $p \leq 100$ and displays the results as follows**

p	$2^p - 1$
2	3
3	7
5	31
…	…

   Use BigInteger to hold the resulting number since it is too large to store in the long format.

   Execute the program and paste the result as a comment at the bottom of the program listing.

2. **Write a program that finds**
   a. **five prime numbers larger than Long.MAX_VALUE**
   b. **the first ten numbers with 50 decimal digits that are divisible by 2 or by 3.**
   c. **A Mersenne Prime p where p > Long.MAX_VALUE**