Homework for Dr. Z.'s MathHistory for Lecture 21

0. Review your History notebook and make sure that you absorbed everything.

The other problems should be either hand-written or typed and sent as .pdf file or .txt file (PLEASE no other formats) to DrZlinear@gmail.com by 8:00pm Sunday, Dec. 5, 2021 ,

Subject: hw21

with an attachment: hw21FirstLast.pdf (or hw21FirstLast.txt)

Also in the BODY of the homework, have your name and indicate whether it is OK to post the homework in my web-site.

1. Compute the Mobius function $\mu(n)$ for n between 1 and 20, amd use it to compute the Mertens function $M(n) = \sum_{i=1}^{n} \mu(n)$ for $1 \leq n \leq 20$.

2. Verify the Goldbach conjecture for all even integers between 4 and 30.

3. List of all the twin primes less than 30

4. Verify the Collatz conjecture for all n between 2 and 20.