Senior Seminar
Homework for Chapter 10

1. If you were to apply Euler's idea to try to factor $2^{64} + 1$, what form must any prime factor be in? And what are the first two actual prime number candidate factors? (You do not need to try to factor $2^{64} + 1$.)

2. Use Fermat's Little Theorem to prove that $2011^{2011} - 2011^{2001}$ is a multiple of 11.