- 1. Compute  $5^{140} \pmod{1528}$
- 2. Show the Euler's Theorem holds in the case where a = 77 and n = 221. That is show that  $77^{\phi(n)} \equiv 1 \pmod{n}$ .
- 3. Show that 2821 is a Carmicheal number.
- 4. (Start on Friday) Suppose you recover the following message fragment: 4745 from Alice to Bob. Break it knowing it was enciphered with RSA and the public keys are n = 17879 and enciphering key e = 11107. Once you all break it and combine your answers with your classmates in alphabetic order by your last name then you will get the total message.
- 5. Explain how you have divided up the work in your project. Who is doing what?