Math 314 - Fall 2018
Mission 0   Due August 29th

There are two kinds of cryptography in this world: cryptography that will stop your kid sister from reading your files, and cryptography that will stop major governments from reading your files.
— Bruce Schneier

1. Instructions

Use the email you received to sign up for a CoCalc account. (Note: you will need to pay the $14 fee to use CoCalc for the semester by September 8th, however it is free for the first two weeks. CoCalc is free to use on your own, but this allows us to use dedicated servers during the semester that don't get turned off when the system is too busy.)

After you create an account you will already be enrolled in the course. Inside the course project you will find a Mission 0 folder with the files for this mission.

1. Open up Mission0Sage.sagews and do the two problems there.
2. Open up Mission0.tex. Change the author to your name and the title to "Mission 0".
3. Any time you type a mathematical expression in latex you must surround it in dollar signs. On a new line put the code:

    `$3^2+2=11$`

4. For a more complicated expression you can put the math between double dollar signs and it will get displayed. On a new line put the code:

    `$$\sum_{i=1}^n 1 = n$$`

5. Type a sentence containing the equation $5 \times 6 \equiv 4 \pmod{26}$. Make sure to make the math look right! (Hint: you'll want to use the commands `\times`, `\equiv` and `\pmod{26}`.)
6. Use the command `\frac{a}{b}` to type the equation

$$\sum_{i=1}^n i = \frac{n(n+1)}{2}.$$

7. The ciphertext `euayurbkjoz` was encrypted using a shift (Caesar) cipher with shift 6. Decrypt the message and put it into your latex file. When you do, put it inside the `\texttt{}` command to print it in `typewriter text`.

You don't need to do anything else to turn in the assignment, it will automatically be collected!