MA111: Contemporary mathematics

Entrance Slip (due 5 min past the hour):

Does this secret message "**Wagib'v seuc uv waa oivb!**"
say "Today's quiz is too hard!"?

Why or why not? If not, what does it say?

Schedule:

- HW 1 is due Tuesday, Oct 6th, 2015
- Mini-Exam 2 is in-class on Thursday, Oct 8th, 2015
- HW 2 is due Tuesday, Oct 13th, 2015
- HW 3 is due Thursday, Oct 15th, 2015
- HW 4 is due Tuesday, Oct 20th, 2015
- Exam 2 is in-class on Thursday, Oct 22nd, 2015

Today we investigate secret codes.

While we are passing out the worksheet...

- Please turn in your entrance slips. We will do this every non-exam day. Please bring your own 3x5 index cards.

  Encrypted: "Wagib'v seuc uv waa oivb!"
  Decrypted: "Today's quiz is too hard!"

- Who knows why the proposed decrypted message was wrong?

- What was the correct message?

- Is there some way to describe how to go from the encrypted (glowy) to the decrypted (regular)?

Old words

Our first day in the new chapter!

No more worries about voting.

This will fill up with cryptography words.

New words

- **Encryption** takes the **plaintext** and converts it to **ciphertext**

- **Decryption** does the reverse

- The combination of the two (the method) is called the **cipher**

- Most modern ciphers come in families, where the method changes slightly based on the **key**

- Some ciphers have one key for encryption and one for decryption

- A **shift cipher** replaces letter-by-letter, using a shifted alphabet. The amount of shift is the key.

  The Julius Caesar key is used in the **eesfwesl** example.

  The Augustus Caesar key is used in the **oholdikq** example.

Exit quiz

- The secret message reads **E ul u ronaqrnx!** and there are pictures on the back of a `dog` and a `bunny rabbit`:

cif

zommx quzzes

- What does it say?

- How does the system work?