

Caesar Cipher Exploration Questions

You are sending messages to your allies, but you need to keep them secret from your enemies. You encode letters as numbers using:

A	B	C	D	...	Z
0	1	2	3	...	25

and the numbers are then altered using

$$\text{Coded} = (A * \text{original} + B) \bmod 26.$$

Part 1

You have a coding machine. Your job is to input text, choose values for A and B and then get the coded messages. Good luck!

Code the message given to you by the teacher.

Part 2

Swap your message and values for A and B with a classmate, and try to decode the message by hand. First you must decide what $1/A$ is mod 26. Then decode using

$$\text{original} = ((1/A) * (\text{coded} - B)) \bmod 26.$$

Good luck!