Name: ____

Welcome to Spy Club! Today we're playing with the RSA cipher.

- (1) If we pick our primes p=13 and q=5, find **n** and **m**.
- (2) List 3 good values for e(mod m).
- (3) List 3 bad values for e(mod m).
- (4) Now suppose that we announce in our Spy Club newsletter that e=5 and n=65. Encrypt the following words using the RSA Cipher and our numbering system where A → 1, B → 2, ..., Z → 26.
 (a) MILK

(b) COOKIES

- (5) Find the decryption exponent \mathbf{d} .
- (6) Decrypt the message 8 29 using our RSA Cipher. It might be helpful to know that $8^7 \pmod{65} = 57$ and $29^9 \pmod{65} = 14$.