# Caesar Cipher

Cut out dotted line circle on smaller disk

Outside wheel is ciphertext
Inside wheel is plaintext
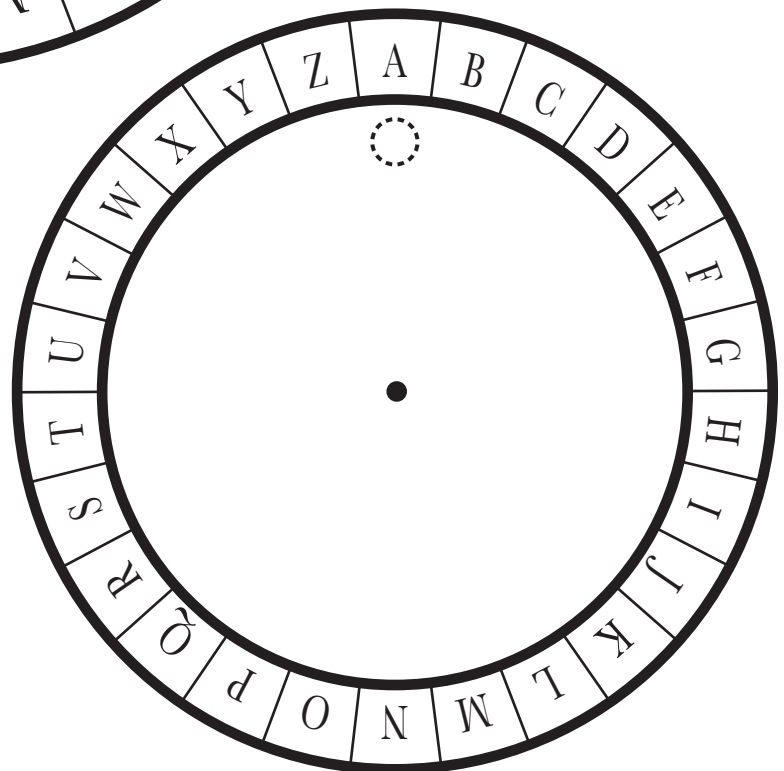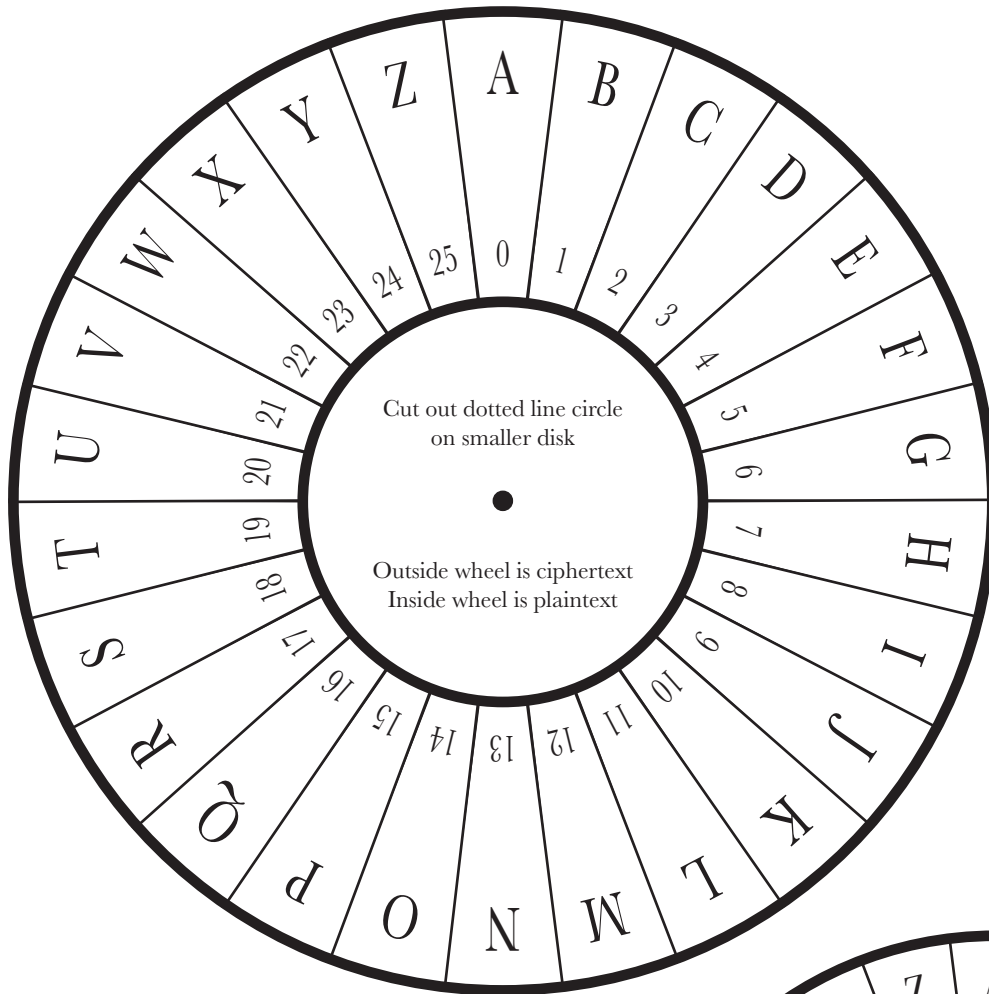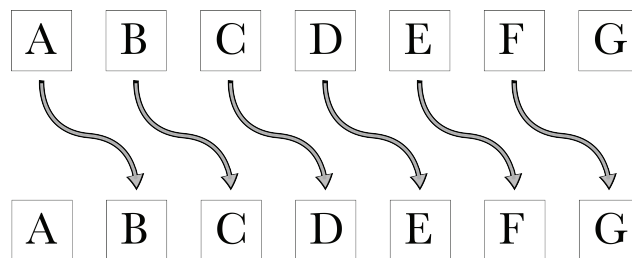
# Caesar Cipher

A Caesar cipher (also known as a Caesar shift, Caesar substitution, shift cipher, or a ROT-n cipher, short for rotation by n letters), is a simple substitution cipher. It is made by shifting each letter of the alphabet a predetermined number of places, or rotations (ROT for short). For example, in a ROT1 shift, the letter A becomes B, B becomes C, etc. .

| A | B | C | D | E | F | G |

| A | B | C | D | E | F | G |

In the example below, the top alphabet is shifted 3 spaces to the right. This is called a ROT3 cipher because the alphabet was rotated 3 spaces.

| Plaintext | X | Y | Z | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ciphertext | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| ROT$n$ | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |

To encode - that is, to convert the plaintext message into ciphertext - take the letters of your message from the top row (plaintext) and replace them with the letters of the bottom (ciphertext).

Using a ROT3 cipher, the following: "What's brown and sticky? A stick." would look like this:

"Zkdw'v eurzq dqg vwlfnb? D vwlfn."

# Caesar Cipher

A really simple way to encode and decode your messages is using a cipher disk. Cut out the two circles on the first page, cut out or punch a hole through the dotted line cirle, and use a brad pin to connect the top circle to the bottom circle.

The number tells you which ROT-n it is, the outside letters are the ciphertext (the coded message) and the inside letters are the plaintext (the original message).

Your turn! Answer the following using a ROT3 cipher.

Would you rather have a flying carpet or a personal robot?

_____

Would your rather be the smartest person alive or the funniest?

_____

Would you rather eat donuts the rest of your life or candy?

_____

Would you rather go to space or live in the ocean?

_____

Would you rather have a pet dinosaur or pet dragon?

_____

# Caesar Cipher

Decode the following messages:

If April showers bring May flowers, what do May flowers bring?
(use a ROT7 cipher)
Wpsnyptz.

_____

What has more letters than the alphabet? (use a ROT11 cipher)
Esp azde zqqtnp!

_____

How do you get a squirrel to like you? (use a ROT20 cipher)
Uwn fcey u hon!

_____

How do you make 7 even? (use a ROT18 cipher)
Lscw sosq lzw k.

_____

What do you call a belt made of watches? (use a ROT13 cipher)
N jnvfg bs gvzr.

_____