



Caesar Cipher Exercises

Exercise 1: Decryption

A plaintext was encrypted with a Caesar cipher with a shift of 7 (A maps to H). The resulting ciphertext is:

Kvu'a qbknl h ivvr if paz jvcly

What was the original plaintext?

Exercise 2: Brute Force

Use Brute Force to crack the following Caesar ciphertext, to identify the person encoded:

KRPCFIJNZWK

Hint: Brute force is best for this question, because there are not enough letters for a frequency analysis (most letters appear once, with only K appearing twice)

Exercise 3: Spotting Patterns

A plaintext was encrypted with a Caesar cipher, resulting in the following:

DOOV ZHOO WKDW HQGV ZHOO

Can you work out what the plaintext was?

Hint: Note that there are several occurrences of “OO” appearing within the enciphered words. This must correspond to a double letter in the plaintext. Only some letters in English can be doubled up, so you can try some guesses.

Exercise 4: Frequency Analysis:

A plaintext had its punctuation and spaces removed, and was then encrypted with a Caesar cipher. The resulting ciphertext is:

cxknoxawccxkncqjcrbcqzdnbcrxwfruurjvbqjtnbynjan

Use frequency analysis to identify which ciphertext characters are most common.

What was the original plaintext?

Hint: In plaintext English, the most common letter is E. Using frequency analysis, a sensible guess would be to try a shift which maps E to one of the most common ciphertext characters.

Exercise 5:

Use any method (brute force, spotting patterns, frequency analysis, or invent your own) to decode the following encoded with a Caesar Cipher.

Adhz iypssp, huk aol zspaof avclz

Kpk nfyf huk nptisl pu aol dhil:

Hss tptzf dlyl aol ivyvnvclz,

Huk aol tvtl yhaoz vbanyhil.

Ildhyl aol Qhiilydvjr, tf zvu!

Aol qhdz aoha ipal, aol jshdz aoha jhajo!

Ildhyl aol Qbiqbi ipyk, huk zobu

Aol mybtpvbz lhuklyzuhajo!

If you want to use Frequency Analysis, here are the frequencies of the ciphertext characters:

Code	Count	Frequency
L	25	12.195 %
A	21	10.244 %
H	19	9.268 %
O	16	7.805 %
I	14	6.829 %
Z	12	5.854 %
Y	12	5.854 %
P	10	4.878 %
U	9	4.390 %
V	9	4.390 %
D	8	3.902 %
K	8	3.902 %
S	7	3.415 %
T	7	3.415 %
B	6	2.927 %
N	5	2.439 %
J	5	2.439 %
F	4	1.951 %
Q	4	1.951 %
C	2	0.976 %
R	1	0.488 %
M	1	0.488 %
Total Count: 205		