Cryptography: Part 0: Substitutions

Physics II: Modern Physics

College of the Atlantic

Decrypt the following message:

Uryyb sebz Bertba. V ubcr lbh unq n tbbq jrrx rvtug. Gur jbexfubc urer

unf tbar jryy. Arkg jrrx jr jvyy fgneg yrneavat nobhg pelcgbtencul.

V guvax vg jvyy or n sha naq vagrerfgvat jnl gb raq gur grez.

Unir n tbbq jrrxraq.

Letter	Frequency
A	8.2
B	1.5
C	2.8
D	4.3
E	12.8
F	2.2
G	2.0
H	6.1
I	7.0
J	0.2
K	0.8
L	4.0
M	2.4
N	6.7
O	7.5
P	1.9
Q	0.1
R	6.0
S	6.3
T	9.1
U	2.8
V	1.0
W	2.3
X	0.1
Y	2.0
Z	0.1

Relative frequencies of letters in English. Source: `http://en.wikipedia.org/wiki/Letter_frequency`

Cryptography: Part 1: Vigenère Ciphers
Physics II: Modern Physics
College of the Atlantic

1. Decrypt the following message:

   `VORXXB BCEZ LLTRZUMS`

   The cyclic key is `TOFU`.

2. Come up with a short secret message. Encode it using a cyclic key of your choice. Write the ciphertext on a separate piece of paper, give it to another group, and tell the group the key. From another group, get a cipher text and key and decode it.

3. Decrypt the following message:

   `LHP TQRZ LW RDMFWG COVV`

   The running key is `SALAMANDERSARENOTREPTILES`.