

CIS 3362 Homework #2B: Substitution Cipher, Vigenere
Due: Check WebCourses for the due date.

Part B: Code Breaking/Decrypting Questions

1) The message below was encoded using a modified substitution cipher similar to the Queen Mary cipher.

Here is the key used for encryption:

Plain	Cipher	Plain	Cipher	Plain	Cipher	Plain	Cipher
A	M	B	V	C	%	D	Y
E	0(zero)	F	4	G	K	H	2
I	E	J	Q	K	G	L	C
M	U	N	I	O	X	P	8
Q	J	R	9	S	\$	T	S
U	N	V	D	W	P	X	^
Y	A	Z	#	Null	5	Null	&
Backspace	@	THE	!	AND	6	WAS	L
WERE	3	WITH	O(letter)	WHERE	1 (one)	GO	*
TO	R	WALK	H	LOOK	T	FIND	B
PRIZE	F	AT	W	THERE	Z	BEHIND	7

Here is the ciphertext produced:

P2MSECEG0&SXYXE\$25EY0M895E#04X9M%XN8C02XU0&PX9GF@M\$SEKIU0&IS
\$XIOU&0\$MK0UEK2S\$P@MAP2M&SS2089EF@#0&E\$MI5YMIXS209P2090ESE\$
&UMAV0Y@ES\$V02EI5YM%&2ME9P2XGIX7@P\$E2@D&0I0D0E@9YXI0MJN0\$SEX
ICEG0S2E\$VNSES52XN5K2SESY@UEK25SV04N8@ISXY0%5XY0MUM9ACEGL@0%
5XY0PES2S2MS0^S9M\$SN44SXX5@2M9YSXV90MG&VNS5PES2S20G0AES8@\$IX
S\$5XVMY9E5K2SCXXV@&GS209&0CXXGP20900D09AP20904EIY3@ESQN\$V@SS
&0@0\$5S5EI&KXNS&%XY0PX9Y\$AX5N&\$00YC@XIS4X9KW@0SJ@AXZ@NB@UM5A
2MD0SXPMCG\$XU0K@P209L@0SX4EI&Y895E#0\$KXXYCN&%G

Write a program (or I suppose you could do this by hand...) to recover the plaintext.

2) Decode the following message, which was encrypted using the substitution cipher. Make sure to discuss all the steps you took, the key you arrived at, and the decoded message.

chwzltrwaglhguwiglncigityyqwmmsggyciwxcvdgyymljchmcjltohcoggd
gymxdlwifmsnjgxbgzwchmcugctkmcwjvgpcgiglngxchwapcplwzlgqywuq
wsmppjwchmcgxwzlgqywuchlwityyjjzwstavihlwmxdhgicgsymtuchwciw
xcvdgyymljgasgpljwtxmuxgcutjcwlugxwvqmojjggxyvchwkwlvatljczwl
jgxtxchwsymjjcgslmsnchwsqdwmxdygsmcchwugxwvityyowctcitchxwm
lyvgxwhpxdlwmdxdtbcvzwgzywtchwsymjjtcityyqwmolwmcmshtwkwuw
xccgitxchwsymjhoggdypsncgmyy

3) Decode the following message, which was encrypted using the Vigenere cipher. Make sure to discuss all the steps you took, the key you arrived at, and the decoded message.

Here is the ciphertext:

lhjttbugissvfhiomptswpsjzxuqnpqtpbftkwleqmfnbxzknezedtdxxcree
eouwawtenwnnumykmvucfeeuoviopfkaguekivwzqebshbivudgrdmolmvotlf
psmtbgryatzmetdgayvazfakiyajxrpntxiehtfggprizqfpxsjpnttfegwlp
qmxvviissvfhiomphpjtifmhvgyhzausonvgeoloepilnknozespfyqeehzeot
hxqutswrfrbnwacyeghfsituhrzeasvplktyalohsaipacwsstbnwqludlwbot
xlvoewlmzonbjaeattxoglgrqmluphtdgyzmbbdkhveaxhutnarqjagwmzqrb
hgpwwatfiygguljeuieyqtselouflepgrazitthxajofddibvxuqnpqfpsyhc

