

### Homework 3

1.

a. XSHIFT 5

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
F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E

Message: CEASE FIRE AT ELEVEN

Shift 5 message: hjfxj knwj fy jqjajs

b. ATBASH CIPHER

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
Z	Y	X	W	V	U	T	S	R	Q	P	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A

Message: CEASE FIRE AT ELEVEN

Shift 5 message: xvzhv uriv zg vovevm

c. KEY

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  
Q M 3 G R A W Z 4 + P B T 2 X C H 7 U E S 8 1 L J F

Message: CEASE FIRE AT ELEVEN

Cryptotext: 3RQUR A47R QE RBR8R2

2.

a. Word: MBMTGBV

Using Vigenere Square: Most occurring letters in word: M, B.

Assuming M = E, Shift = 18. Message = etelytn. NOT A WORD.

Assuming B = E, Shift = 3. Message = pepwjey. NOT A WORD.

Assuming M = T Shift = 7. Message = titanic. A WORD!

b. Phrase: P SVCL JYFWAVNYHWOF

Using Vigenere Square: One letter words: P

Assuming P = A, Shift = 11. Message = a dgnw ujqhlgyjshzq NOT A PHRASE

Assuming P = I, Shift = 19. Message = i love cryptography A PHRASE!