

Week 3 Friday

Turn to your neighbor and introduce yourself! Then work together and, using a Playfair cipher with key given by the grid below, decrypt: WZ LT OP WK SH ES VX PH.

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

Polyalphabetic Cipher

1. Use a Vignère cipher with keyword AND to encrypt the message "Six Meals."

Feel free to split up the work with your neighbors!

2. Use a Vignère cipher with keyword AND to decrypt:

YBX SUD LYQ OGS AFV.

Feel free to split up the work with your neighbors!

3. Suppose you want to encrypt a sequence of bits (ie, a sequence of 0s and 1s) using a 2×2 Hill cipher. How many different encryption functions are there? In other words, how many different congruence classes of 2×2 matrices can be used as a key for a Hill cipher?

(A) 2

(B) 6

(C) 16

(D) None of the above