Pollux & Morbit

3/21

The basics

Only decryption! But will still teach encryption for fundamental understanding

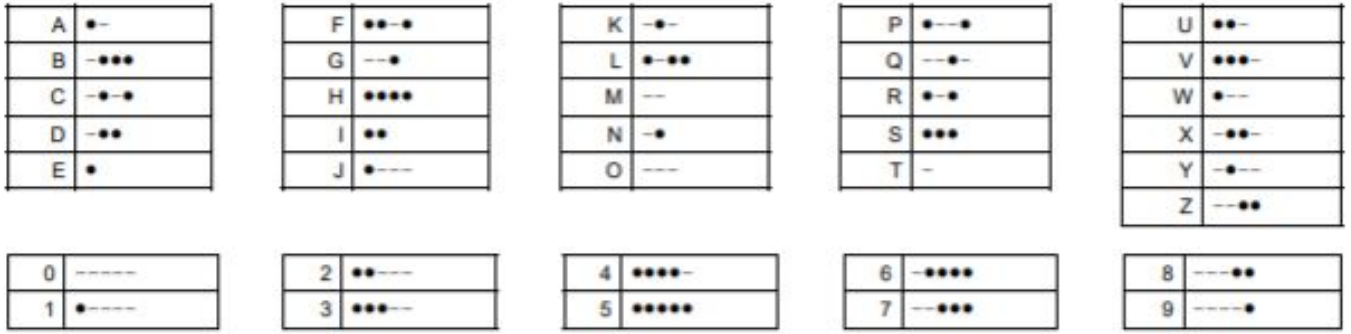
- Based off of morse code
  - Although the rules list them in the same breath (pollux/morbit), they are two different ciphers
- Morse code encoded in digits & spaces, given 6 of those digits' mappings

https://quizlet.com/7375/morse-code-flash-cards/

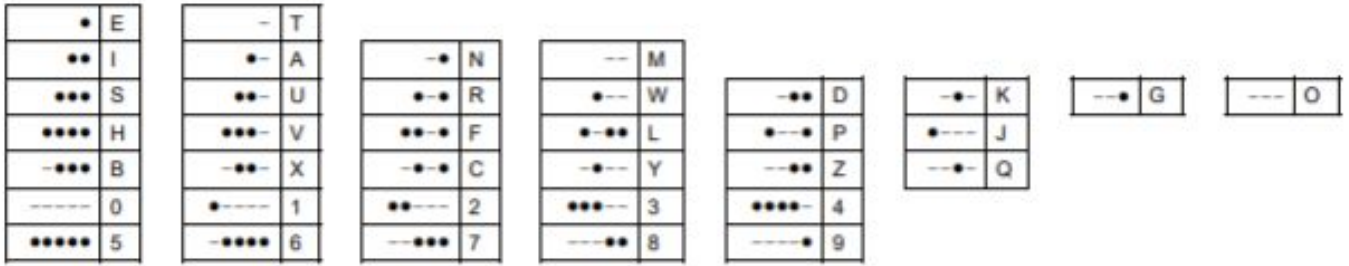
***Will be given to you when you are taking a test

Morse Code

By Letter



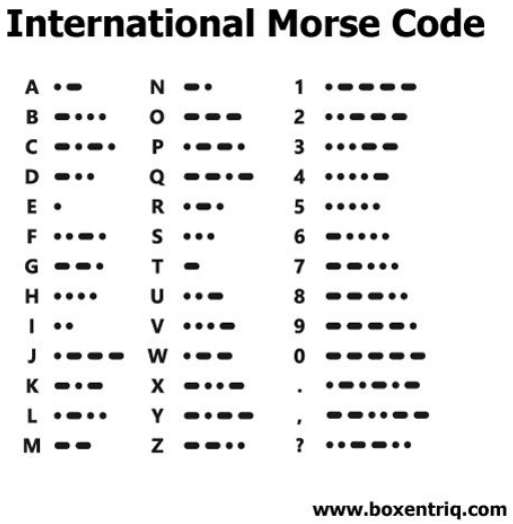
By pattern

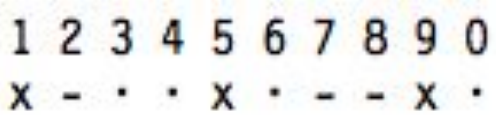


More stuff about Morse code

Letters separated by x and words by xx

- Don’t worry about the numbers
- Yeah get familiar with it





Pollux (Encryption)

http://www.cryptogram.org/downloads/aca.info/ciphers/Pollux.pdf

- Each digit 0-9 represents a long, short, or space (dash, dot, or x)
- Keep yourself organized by writing the mappings in a table
- Convert your plaintext (i.e. Hello) to morse code
- Now convert to whatever number fits the job
  - If your first digit is a -, then you can choose between 2, 7, and 8 in the example above
- Keep them in groups of five

Pollux Decryption

Because of the length of morse code, there MUST be at least 1 X every 5 characters

- Start with this! X’s are your best friend
- Once you can’t narrow down any more X’s, convert what you can to letters and try to discern what the message is
- Remember, most times the division will be 4 dots, 3 dashes, and 3 dots

Pollux Example

Someone has encoded a phrase using the Pollux cipher and told you that 2,3 are Dots, 5,6 are Dashes and 8,9 are spaces (x). What does it say?

120598110122784733744918059466981433939350262961983 13

045586671875694659162822303776151766696320 3

International Morse Code

A •–	N –•	1 •———–
B –•••	O –––	2 ••–––
C –•–•	P •––•	3 •••––
D –••	Q ––•–	4 ••••–
E •	R •–•	5 •••••
F ••–•	S •••	6 –••••
G ––•	T –	7 ––•••
H ••••	U ••–	8 –––••
I ••	V •••–	9 ––––•
J •–––	W •––	0 –––––
K –•–	X –••–	. •–•–•–
L •–••	Y –•––	, ––••––
M ––	Z ––••	? ••––••

www.boxentriq.com

Multiple numbers (usually 3) with the same symbol (•, -, x)

https://toebes.com/codebusters/Samples/Solving_Pollux.htm

Solving Pollux Cipher

- Fill in what you know

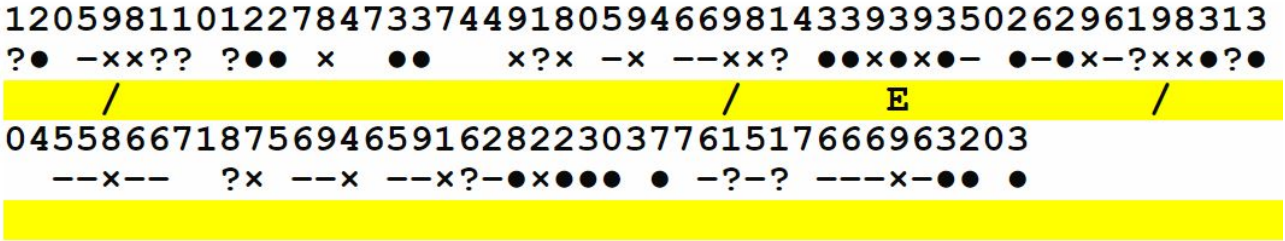
- No word can be longer than 4 symbols

- Symbols repeat

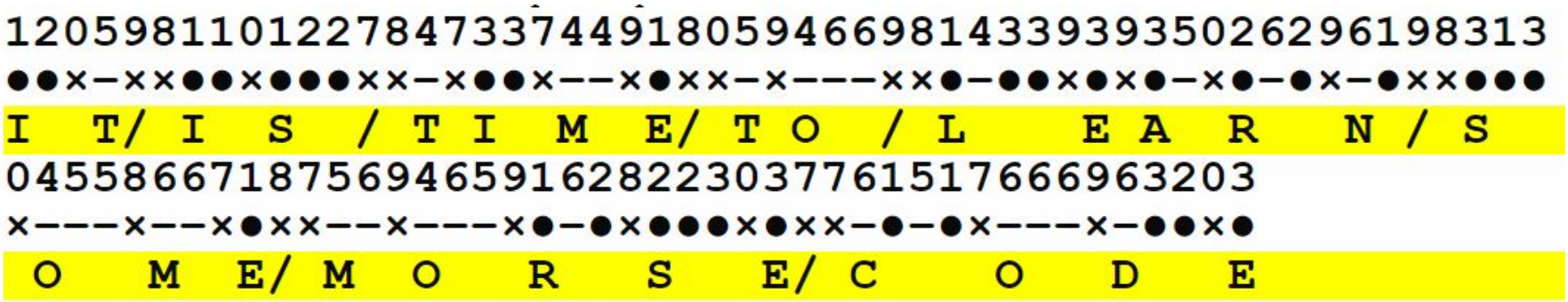
- Think of possible letters or words

-The first symbol cannot be an x

-Cannot have 3 (x)s in a row



Pollux Solution



Morbit

Similar, but 1 number matches to a series of 2 symbols (instead of just 1)

Morbit Example



A quote by Melinda Chapman has been encoded using the Morbit Cipher for you to decode. You are told that 8=××, 5=●●, 9=×●, 4=●×, 2=●–, 6=–×

5 8 5 5 9 6 5 2 9 8 2 8 5 4 5 5 3 7 3 2 4 1 6 5 3 4

7 4 3 6 4 7 3 7 9 1 3 2 6 9 4 9 1 9 3 6 4 7 3 5 4

4 2 4 9 9 5 6 4 2 4 1 7 3 9 5 4 5 3 4 7 4

One number = 2 symbols

Possibilities								
••	•-	•X	-•	--	-X	X•	X-	XX

***Cannot repeat

https://toebes.com/codebusters/Samples/Solving_Morbit.htm

Solving Morbit Cipher

- Fill in what you know

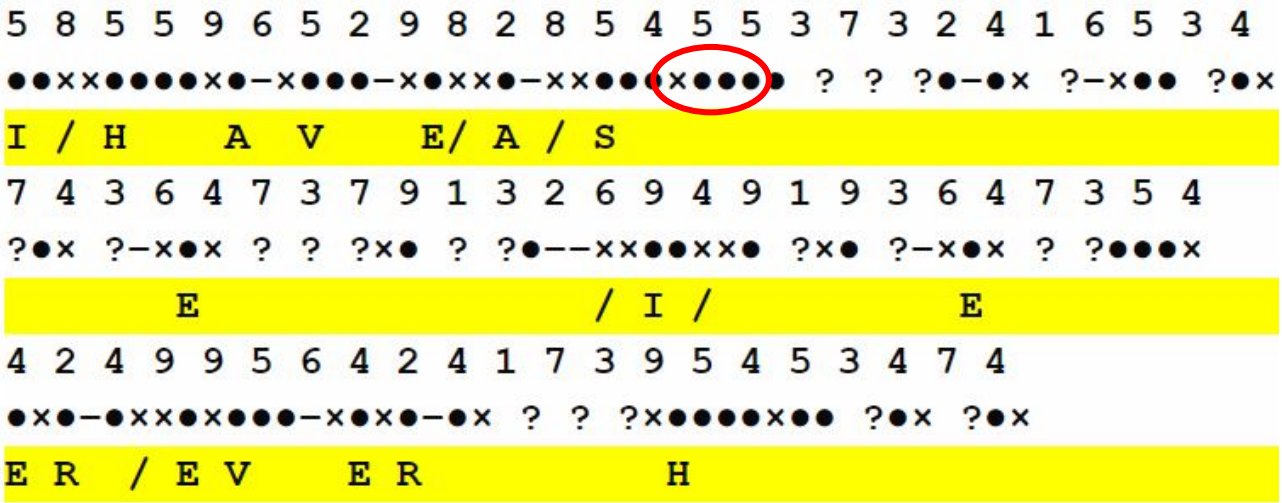
- No word can be longer than 4 symbols

- There cannot be a repeat of pattern
    - For example, if 8 = xx, no other number can be xx

- Think of possible letters/words

-The first symbol cannot be an x

-Cannot have 3 (x)s in a row



Morbit Cipher Solution

