Cryptography Cheat Sheet

Bacon Cipher

Choose your hidden message.
Choose two fonts and label them A and B.
Write out a boring message with 5 times as many characters as the hidden message.
Encode your hidden message following the table below by changing the fonts of your boring message from A to B following the encoding of the hidden message.

a: AAAAA	h: AABBB	o: ABBBA	v: BABAB
b: AAAAB	i: ABAAA	p: ABBBB	w: BABBA
c: AAABA	j: ABAAB	q: BAAAA	x: BABBB
d: AAABB	k: ABABA	r: BAAAB	y: BBAAA
e: AABAA	l: ABABB	s: BAABA	z: BBAAB
f: AABAB	m: ABBAA	t: BAABB	
g: AABBA	n: ABBAB	u: BABAA	

Hidden message: Bacon is good
Regular message: I went to school today, it was raining. No I do not like it when it rains.
Font type A: Uppercase
Font type B: Lowercase

Hidden message enciphered:

B	A	C	O	N	I	S
AAAAB	AAAAA	AAABA	ABBBA	ABBAB	ABAAA	BAABA

G	O	O	D
AABBA	ABBBA	ABBBA	AAABB

Hidden message inside regular message: I WENt TO SCHOOL tODay, iT Was RaInING. nO I dO NOt lIKe it WHen iT RAIns.

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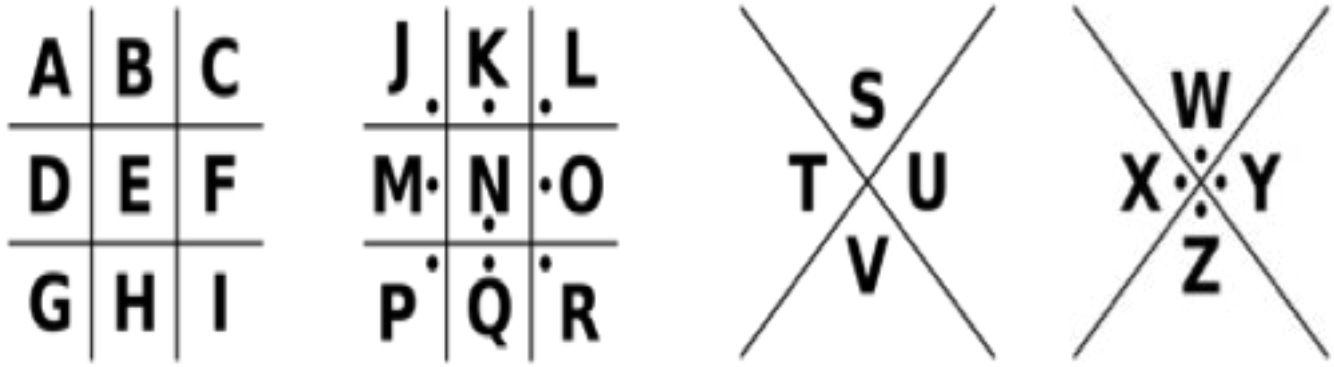
Pig Pen Cipher

Write out your message.
To encrypt the message, replace each letter with the corresponding symbol
The sent message is the collection of symbols.
To decrypt the message, replace the symbols with the corresponding letter.



Pig Pen Cipher Example

Plaintext message: Schoolwork is boring but Technocamps sessions are fun.

Ciphertext message:

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Shift Cipher & Example

Write out your message.
Choose a key between 0-25.
To encrypt your message, shift each letter in the message forward the key number of places in the alphabet.
To decrypt the ciphertext message, shift each letter backward the key number of places in the alphabet.

Example:
Caesar Cipher - key = 3
Plaintext message: A great book on cryptography is the Code Book by Simon Singh

Ciphertext message: D juhdw errs rq fubswrjudskb lv wkh frgh errn eb vlprq vlqjk

Key = 16
Plaintext message: Cryptography is cool and used all the time in everyday life.
Ciphertext message: Shofjewhqfxo yi seeb qdt kiut qbb jxu jycu yd uluhotqo byvu

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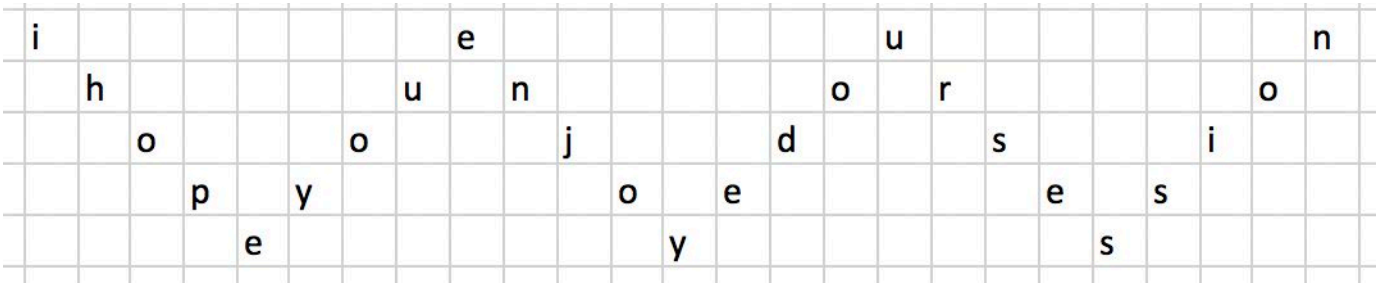
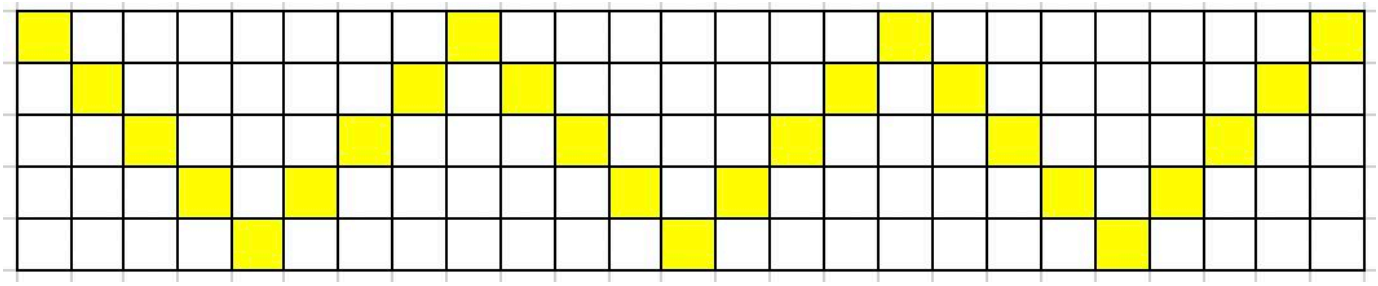
Rail Fence Cipher & Example

Choose your number of rails.
To encrypt your message draw a grid for the rails and write your message out in a zig zag pattern along the rails.
Read the ciphertext message along the rails, line by line.
To decrypt the message, create a grid with the correct number of rails and spaces for the message. Write out the ciphertext message along the rails.

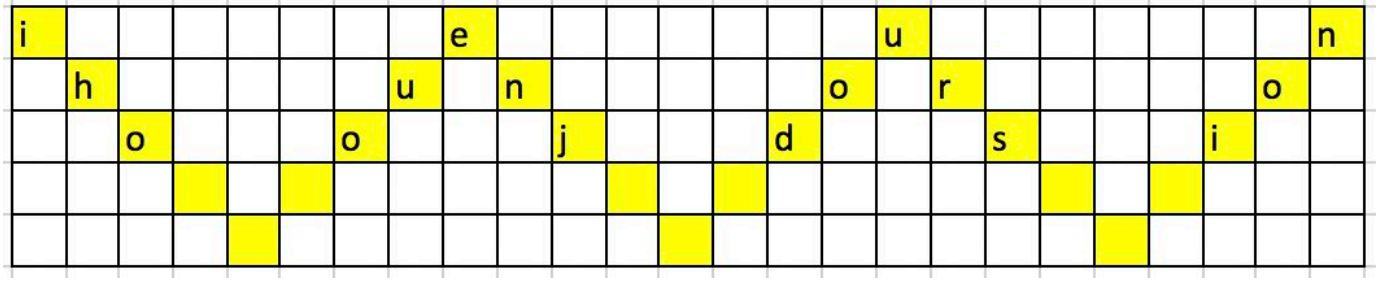
Number of rails: 5
Plaintext message: I hope you enjoyed our session there is loads more cryptography to be found online



Ciphertext message: ieunhunorooojdsipyoeeseys
Decryption: message length = 25, rails = 5



Then write out the ciphertext along the rails, line by line.



Cryptography Cheat Sheet

Keywords

Steganography
Code
Encrypt/Encipher
Substitution
Plaintext
Cryptography
Cipher
Decrypt/Decipher
Transposition
Ciphertext

Steganography - The practice of concealing messages or information within other non-secret text or data.

Cryptography - Is the practice and study of techniques for secure communication.

Code - A method of encryption in which entire words or phrases in the message are converted into something else.

Cipher - A method of encryption which changes a message on a letter by letter by basis.

Encrypt/Encipher - The process of converting information or data to prevent unauthorised access.

Decrypt/Decipher - The conversion of encrypted data into its original form.

Substitution - A method of encryption where individual letters are substituted for other letters or symbols.

Transposition - A method of encryption in which the order of letters in the message are changed.

Plaintext - The original message/text.

Ciphertext - The encrypted message/text.