Puzzled Pint
December 2017

META

★★★☆☆
The Secret Message

Noti**c**e **that** a**l**l **o**f t**h**e **a**ns**wers** you **foun**d a**r**e **n**am**e**s **of** **his**to**r**ic**a**l **c**ip**h**er**s**!

Some puzzle hunts like to use these ciphers and others to obscure their answers, so it's always good to have them in mind when solving puzzles. The next page contains a quick primer on decoding each of the ciphers used in the set. It should be enough for you to solve this puzzle. However, full details of the ciphers, and their fascinating history can be found on Wikipedia, if you're interested.

To ensure you are deciphering intermediate ciphertext correctly, you should get and remove a "PP" prefix at each step, and you can ask GC to confirm each step too, if you wish.

Decipher the secret message to get a word that describes it.

P P __ __ __ __ __ __ __ __ __ __ __ __

P P __ __ __ __ __ __ __ __ __

Use the name of the cipher as the key.

P P __ __ __ __ __ __

Use the grid you already made.

__ __ __ __ __ __
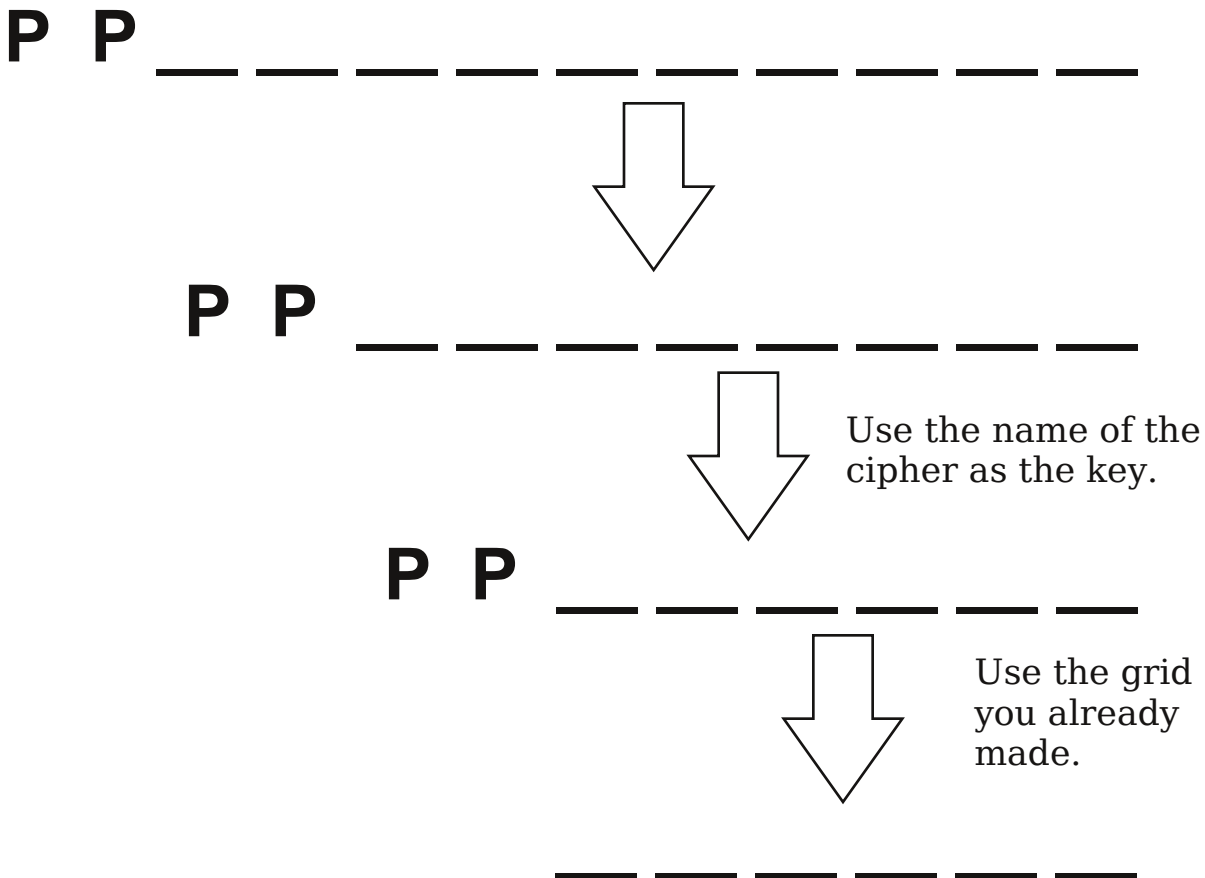
Decoding the Bacon Cipher

Look for typeface differences. For each letter, mark it 0 if the letter is normal, and 1 if it is special (e.g. **bold**). Then group the numbers into sets of five. Look up each group on your code sheet as if it was binary, except A is 00000, and B is 00001. Example: "PP" is hidden in "t**his m**e**ssag**e".

Decoding the Atbash Cipher

Simply replace:
A with **Z**,
B with **Y**,
C with **X** and so forth.

Example: "PP" is "KK"

Decoding the Vigenère Cipher

To encode or decode Vigenere, you need to first change the key into a sequence of shift values with A=0, B=1, and so forth. For example, the key ABZY turns into 0,1,25,24.

Then you apply that shift for each character in turn, repeating the shift sequence when you run out. To encrypt shift down (towards the bottom of your code sheet), and to decrypt shift up.

For example, if we have the key "**PINT**" and the ciphertext "**ECMSAMQ**", first we change **PINT** into **15,8,13,19** (one less than on your code sheet, since A is 0). Then we decrypt by shifting **E** up by 15 to get **P**, **C** up by 8 to get **U**, **M** up by 13 to get **Z**, and **S** up by 19 to get **Z**. Since we ran out of key, we restart the key from the beginning, shifting **A** up by 15 to get **L**, **M** up by 8 to get **E**, and **Q** up by 13 to get **D**. Thus it decodes to "PUZZLED".

Decoding the Playfair Cipher

To decode a message encoded with Playfair, you need a grid of 25 unique letters. You look at the first pair of letters in your ciphertext and find them in the grid. Draw the smallest rectangle possible that includes both these letters, they will be in the corners of the rectangle. Then, look at the two opposite corners of the rectangle. These will be the decoded letters.

For example, using the grid below, and the ciphertext "**OKOS**" would first look for opposite corners of **OK** to get **PI** and then look at opposite corners of **OS** to get **NT**, giving us "**PINT**".

- We take the **P** for the **O** because you want to always choose the letter in the same row.
- If the the two letters happen to be in the same row, use the letters directly to their left in the grid, wrapping around to the right column, if you are already in the first column.
- Likewise, if your two letters are in the same column, use the letters directly above each, wrapping around to the bottom row if necessary.

Key Grid	OK → PI	OS → NT	FI → KH	PU → KP
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E
F G H I K	F G H I K	F G H I K	F G H I K	F G H I K
L M N O P	L M N O P	L M N O P	L M N O P	L M N O P
Q R S T U	Q R S T U	Q R S T U	Q R S T U	Q R S T U
V W X Y Z	V W X Y Z	V W X Y Z	V W X Y Z	V W X Y Z