

MysteryTwister C3

THE CRYPTO CHALLENGE CONTEST

BEAVER CODE

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Beaver Code

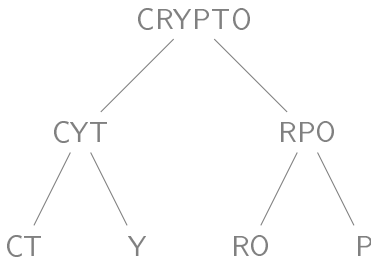
At first, all spaces are deleted from the plaintext in order to encrypt it with the Beaver Code.

Afterwards, the plaintext is divided into two parts. The left half contains all letters that are on an odd position in the plaintext; in the right half all even letters are collected. The resulting parts are divided according to this rule until each part is not longer than two letters. These parts are merged from left to right.

The example on the next slide illustrates the procedure.

Example

Encrypting the plaintext CRYPTO results in the following tree:



Therefore, the ciphertext is CTYROP.

Challenge

The following ciphertext has been encrypted using the Beaver Code:

TTRNEHEORAVNEWSEAABBTREET

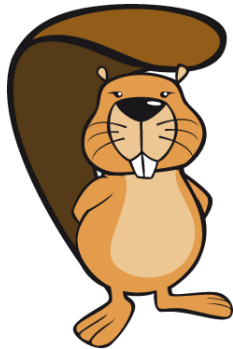
In order to solve the challenge, you need to decrypt the English sentence, insert spaces at the correct positions and enter the sentence in capital letters (without punctuation marks).

Background

You might ask yourself what beavers have to do with this cipher.

The idea for the Beaver Code comes from the German national competition for pupils about computer science in 2010 called „Biber Informatik“.

„Biber“ is the German word for beaver, and this animal is the logo for this competition.



Source: Biber Informatik

Appendix

The Beaver algorithm defines how the letters of the plaintext have to be permuted. Therefore, it is a transposition cipher.

We would like to know whether there is a formula that can be used to calculate the permutation which is needed to decrypt the ciphertext for messages of any given length.