Password

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	512 mebibytes

After another leak of personal data, the administrator of Pochta.com decided to tighten the rules for employee passwords. Now, each employee's password must consist of exactly n characters, and non-letter characters must occur among every three consecutive characters. Additional restriction is that the non-letter character must be present in the center of the password: one center character if n is odd, or both characters closest to the center if n is even.

For example, for $n = 9$, the following passwords are valid: "`p4ss#or0s`", "`1a2b34CD5`". The password "`1234a56bc`" is not valid because the fifth character must be non-letter. The password "`9ASE#orkd`" is not valid because it contains three letters in a row.

For $n = 6$, the passwords "`ab23bc`" and "`5a428E`" are valid. The passwords "`111e11`" and "`4sy1um`" are not valid.

The employees now wonder: what is the minimum and maximum number of non-letter characters that can occur in a password of a given length? Help them figure this out.

Input

The first line contains an integer n: the length of the password ($1 \le n \le 1\,000\,000$).

Output

Output two integers separated by a space: the minimum and maximum number of non-letter characters in the password.

Examples

standard input	*standard output*
1	1 1
2	2 2
3	1 3