
Numerology

X44677_en

Nine Zynoulus is a numerologist, who sees the number 666 and other palindromes everywhere. She thinks that palindromes which are divisible by 666, like 66603330666 or 666 itself, are very important; we call them VIN (Very Important Numbers). Recently, when browsing ancient Measharan inscriptions, she has seen a quite long number W , which does not let her sleep easily. She spends her nights counting ways of removing some digits in W such the remaining number is a VIN. For example, for $W = 6666666$ she could erase each single 6 digit (in 7 ways), or she could erase four digits (in $\binom{7}{4} = 35$ ways), thus she would get 42 ways. Her intuition tells her that the number of ways is divisible by 666, so she returns to 1 after counting each 666th way. Please write a program which will let her verify her intuition.

Input

Input is a single integer W , $1 \leq W < 666^{36}$.

Output

Return a single number x , $0 \leq x < 666$, which is the number of ways modulo 666.

Sample input

6666666

Sample output

42

Problem information

Author : Eryk Kopczynski

Generation : 2013-09-02 16:01:15

© Jutge.org, 2006–2013.

<http://www.jutge.org>