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 intuiton 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 1

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6666666
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Sample output 1

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42
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Problem information

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Generation: 2026-01-25T21:30:32.400Z