(Adv.) Competitive Programming

Submit until end of contest, via the judge interface

Problem: gifts (1 second timelimit)

Your friend invited you to a party for her snail *Primus* and told you to bring a gift. Knowing that Primus likes to get numbers, you want to get him the best number that you can find. Unfortunately all pure primes are sold out. Even 2, 3, 5, 7, 11 and the other cheap small ones! You figure, that a dirty composite isn't as bad as one says. Maybe Primus won't notice. After some hesitation and remorse, you find yourself in a shady backstreet looking into the trunk of a car. The guy with the black hoody says, these numbers are the best ones in town. Obviously this is not true, since you can clearly see a number with a digit sum divisible by 3. You realize that it's to late to back down. One of these products has to do. After all, they may be large primes with some polluting extra factors.

Input The input contains an item $n \leq 239811952854769$ for sale.

Output Print the best part of this composite.

Sample input	Sample output
180	5
62710561	7919
3000000021	1000000007
64832380142	32416190071
94143178827	3