Rick and Morty's Interdimensional Race for the Coolest Cars!

In a twist of fate, Rick and Morty find themselves in a peculiar universe ruled by the enigmatic MrBeast. Stranded without their trusty space cruiser, they stumble upon a once-in-a-lifetime opportunity: MrBeast is hosting a contest to give away the universe's three fastest cars! The duo can use these cars to rebuild their space cruiser and get back to their own universe.

The Challenge: This universe is unlike any other. There are n^2 cars available for the taking, but you can only race n cars at a time. Plus, there's an entire army of Karls, each driving a car identical to the others (The driving style, not the cars). The challenge? To identify the three fastest cars with the fewest races possible. MrBeast only needs to know the least number of races to hold. The correct answer will let the winners ride in style.

Here's the twist – there's no such thing as time in this universe. That means no clocks, no stopwatches, no GPS, nada! You can't measure time to determine the fastest cars. Instead, you must rely on races and compare the relative speeds to figure out which three cars reign supreme.

Your mission, should you choose to accept it, is to help Rick and Morty navigate this bizarre universe and secure the fastest three cars. You need to determine the least number of races required to find the three fastest cars, before the end of ACES Coders 2023. Good luck!

Input Format

A single line of input contains n, the number of cars in a single race.

Constraints

- $5 \leq n \leq 10^9$

Output Format

Print the least number of races required