

Problem 3 : Deadly race

Statement

Simply put, **Titans eat people** in the hopes of regaining their humanity, because if they consume the spinal fluid of a **Titan Shifter** (one of nine **people** who can transform into **Titans** at will) they will return to normal.

They unfortunately succeed in breaking down the walls, as a consequence scared people are in a horrible state rushing to save their lives and their loved ones. the poor guys run away from death by trying to reach protected places.

In the beginning, given the number of runners, they escape from the hands of titans and run 3km to finally find where to hide temporarily. Next they want to reach a reinforced place but titans aggressively eat half of them.

The distance of the race will be calculated each time by multiplying the previous distance with the number of units in the number of runners of the last race till humans all die and only two runners get safe. Depending on the final distance they can attend, find out how many citizens that started the race (running) facing titans!

Input

Integer represent the distance of the final race D.

Output

The number of runners who start the first race N.



Example

Input	Output
1152	32
3	2