14 Zombie attack
7 points

Introduction

The scientists of your city are preparing for an imminent zombie outbreak. They have asked you to write a program that simulates the evolution of a zombie apocalypse in a city, assuming a zombie enters the city at noon. Researchers has shown that:

- Every night each zombie infects 2 healthy inhabitants of the city
- 25% of the zombies (rounded up) die when the sun rises
- An infected inhabitant becomes a zombie when the sun sets

Your job is to create a zombie simulator which, given the city's population, calculates how many days will pass until the city is completely infected.

Input

The initial population before the first zombie arrives.

Output

Print out the number of days required by the zombies to infect the entire population.

Example

Input
600

Output
7 days