

Artificium

Living Organism

Runtime Limit – 2s

Problem Statement

An organism that starts with a size of 1 mm^2 is positioned at the center of a circular petri dish with a radius of $r \text{ cm}$. If the organism's size doubles every hour, how many hours will it take to completely cover the dish? Round your answer up to the nearest hour.

Format

Input

An integer r for the radius of the dish in cm.

Output

An integer *hour* for the duration in hours.

Constraints

$$1 \leq r \leq 100$$

Sample

Input

1

Output

9