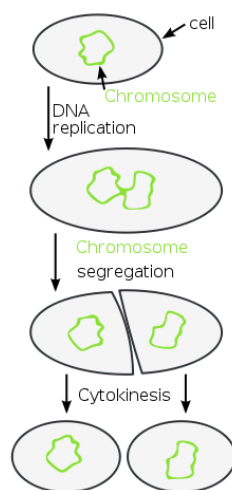## 5 The Magellanic Strain
3 points

Introduction

From the Southern Hemisphere it's possible to admire the Large and Small Magellanic Clouds, which are satellite galaxies of the Milky Way. As some of the closest galaxies to our home galaxy, they stand out as big, misty blobs of light under dark skies. A few days ago, a meteor was observed falling between the two Magellanic Clouds.

Meteor falling between Magellanic Clouds

Unfortunately for mankind, after the meteor was collected, it was discovered that it was carrying an extraterrestrial microbe inside. A team of scientists are studying the growth cycle of the microbe. Like terrestrial bacteria, it follows a four-step process called binary fission to clone itself. This process takes 13 minutes.

Binary Fission

To control the Magellanic strain, the scientists urge you to develop a program to calculate the microbe population after a given amount of time.

Input

The input is composed by two positive integers:

- The first value represents the number of microbes present at the beginning of the measurement.

- The second value represents the amount of time in minutes left to allow bacteria growth.

Output

The output is a single integer reporting the total amount of microbe population expected.

Example 1

Input

3

0

Output

3

Example 2

Input

9

52

Output

144

Example 3

Input

1

25

Output

2