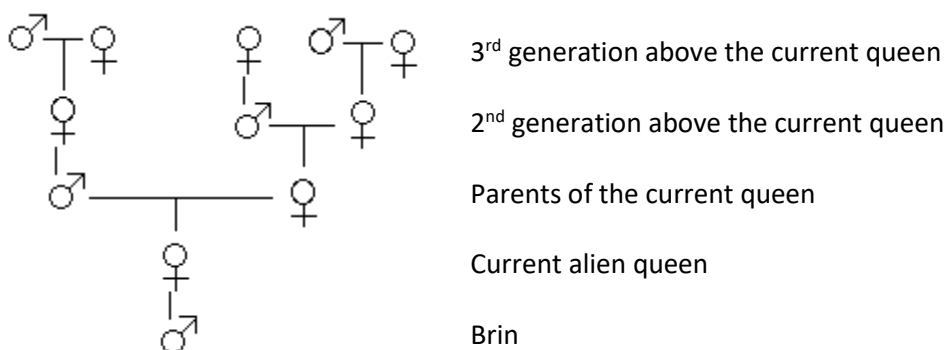


Q4 (10 Marks) The alien in the movie ID4 has a special form of breeding. In every alien hive, a queen (female) lays all the eggs. An unfertilized egg hatches into a drone (male). An egg that is fertilized by a male hatches in a female worker, who doesn't lay egg at all. A female worker can turn into a queen with a special process, but in the end there will be only one queen left per hive anyway.

Consider a family tree of a male alien, named Brin.

- Because he is a male, his parent is only the queen.
- In the first generation above the queen, she has two parents (from fertilization).
- The father of the queen has only one female parent, while the mother of the queen has two parents. So there are three aliens in the second generation above Brin's parent.

In diagram below, male is the symbol with arrow and female is the symbol with cross.



Write a program that computes the number of ancestry aliens in the n^{th} generation above the current alien queen.

INPUT

One number, the generation number above the current alien queen, n , $n \leq 100$

OUTPUT

The number of ancestry aliens in the n^{th} generation above the current alien queen

EXAMPLE

INPUT	OUTPUT
5	13
12	377