Birthday Paradox

Time Limit: 1.0s   **Memory Limit:** 256M

The Birthday Paradox concerns the probability that, in a set of n randomly chosen people, some pair of them will have the same birthday. For groups of at least 23 people, the probability is more than 50% which may sound odd at first sight. METU CClub is curious about a more general form of the birthday paradox. If all of the final contest participants are randomly chosen, what is the probability that some M of them have the same birthday? Your task is to find the minimal number of participants such that this probability is at least P percent.

In this problem we ignore a leap year, i.e. there are 365 days in a year. For each particular participant, the probability of being born on a particular day is $1/365$.

Input

Two integers M and P separated with a single space.

Output

The minimal number of participants.

Constraints

- $1 \leq M \leq 10$
- $0 \leq P \leq 100$

Examples

Input (stdin)

```
2 50
4 100
```

Output(stdout)

```
23
1096
```

Notes

In the second sample according to the Dirichlet's principle among 1096 (3 x 365 + 1) participants at least 4 have the same birthday.