# C Singing Low

Devon enjoys singing, and wants to see how low he can sing. Devon begins at note $N$ ($1 \leq N \leq 10^6$), and would like to sing note 0. In one step, Devon may sing between 1 and $K$ notes lower than his current note (so if $K$ is 3 and he is on note 5, he can sing either 3, 2, or 1 notes lower than his current note, taking him to notes 2, 3, or 4, respectively). However, Devon's note cannot decrease by any given amount more than once (so if he went from note 5 to note 3 in the previous example by going down 2 notes, he would not be able to go to 1 as this would again decrease by 2 notes). Please help Devon calculate the smallest value of $K$ that will allow him to get to note 0.

**INPUT FORMAT:**
The first line will contain the integer $N$, the note that Devon begins on.

**OUTPUT FORMAT:**
The output should consist of one integer, $K$, the lowest value which will allow Devon to reach note 0.

**SAMPLE INPUT:**

```
8
```

**SAMPLE OUTPUT:**

```
4
```