**Subtrees**

**Time Limit: 2000/1000 MS (Java/Others)    Memory Limit: 131072/131072 K (Java/Others)**

**Problem Description**

There is a complete binary tree with N nodes. The subtree of the node i has Ai nodes. How many distinct numbers are there of Ai?

**Input**

There are multiple test cases, no more than 1000 cases.  
For each case contains a single integer N on a line.(1≤N≤1018)

**Output**

The output of each case will be a single integer on a line:the number of subtrees that contain different nodes.

**Sample Input**

5

6

7

8

**Sample Output**

3

4

3

5

**Source**

[BestCoder Round #61 (div.2)](http://acm.hdu.edu.cn/search.php?field=problem&key=BestCoder+Round+%2361+%28div.2%29&source=1&searchmode=source)