D: Inside Regions

Time Limit: 1 second

Audrey is practicing her calligraphy and is experimenting with different aesthetic styles. One day, she realizes that depending on how she writes the digit 4, there can either be one enclosed region inside, or none. She starts to wonder how many enclosed regions each digit has.

Eventually, she decides that the correct way to write each of the 10 digits has the following number of enclosed regions:

Digit	Number of Enclosed Regions
0	1
1	0
2	0
3	0
4	1
5	0
6	1
7	0
8	2
9	1

Given a digit, determine how many enclosed regions it has.

Input

The first and only line of input contains a digit d ($0 \leq d \leq 9$).

Output

Output the number of enclosed regions the digit has.

Sample Input 1	Sample Output 1
4	1

Sample Input 2	Sample Output 2
7	0

Sample Input 3	Sample Output 3
8	2