

Problem H

Pretty Good Cube Root


Problem ID: prettygoodcube

CPU Time limit: 3 seconds

Memory limit: 1024 MB

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Source: Baylor Competitive Learning course

License: 

Given a positive integer x , the cube root of x may or may not be an integer. We'll define an *approximate* cube root of x as the positive integer y such that y^3 is as close is possible to x .

Input

Input has up to 100 lines with one positive integer per line. Each integer may have as many as 500 digits. Input ends at the end of file.

Output

For each input integer, print out its approximate cube root.

Sample Input 1

```
64
472741006443
65991621053219768206433
```

Sample Output 1

```
4
7790
40410690
```