

CCC '04 J1 - Squares

Time limit: 2.0s **Memory limit:** 256M

Canadian Computing Competition: 2004 Stage 1, Junior #1

Gigi likes to play with squares. She has a collection of equal-sized square tiles. Gigi wants to arrange some or all of her tiles on a table to form a solid square. What is the side length of the largest possible square that Gigi can build?

For example, when Gigi has 9 tiles she can use them all to build a square whose side length is 3. But when she has only 8 tiles, the largest square that she can build has side length 2.

Write a program that inputs the number of tiles and then prints out the maximum side length. You may assume that the number of tiles is less than ten thousand.

Sample Input 1

```
9
```

Sample Output 1

```
The largest square has side length 3.
```

Sample Input 2

```
8
```

Sample Output 2

```
The largest square has side length 2.
```

Sample Input 3

```
7535
```

Sample Output 3

The largest square has side length 86.