Java → Basic syntax and simple programs → Control flow statements → The while and do-while loops

The while and do-while loops → The smallest value

📶 Hard   🕐 16 minutes   ⦿

A user inputs a long positive number m. You need to find out what is the **smallest** int number n such that $n! > m$.

Just in case: wiki on factorials.

📝 Report a typo

Sample Input 1:

```
6188989133
```

Sample Output 1:

```
13
```

Sample Input 2:

```
6
```

Sample Output 2:

```
4
```

↳ Write a program

Code Editor   IDE

```java
1   import java.util.Scanner;
2   class Main {
3       public static void main(String[] args) {
4           // put your code here
5           Scanner scanner = new Scanner(System.in);
6
7           long number = scanner.nextLong();
8           long fact = 1L;
9           int ini = 1;
10          while (fact <= number) {
11              fact = 1;
12              for (int i = 1; i <= ini; i++) {
13                  fact *= i;
14              }
15              ++ini;
16          }
17          System.out.println(ini - 1);
18          scanner.close();
19      }
20  }
21
```

✔ Correct.

That's an awesome solution! What do you think about showing it off? **Post it to Solutions** so other learners can enjoy it too.

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😍 🙂 😐 🙁 😡

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