# Problem D: Factovisors

The factorial function, n! is defined thus for n a non-negative integer:

```
0! = 1
n! = n * (n-1)!   (n > 0)
```

We say that a divides b if there exists an integer k such that

```
k*a = b
```

The input to your program consists of several lines, each containing two non-negative integers, n and m, both less than 2^31. For each input line, output a line stating whether or not m divides n!, in the format shown below.

## Sample Input

```
6 9
6 27
20 10000
20 100000
1000 1009
```

## Output for Sample Input

```
9 divides 6!
27 does not divide 6!
10000 divides 20!
100000 does not divide 20!
1009 does not divide 1000!
```