

# MNYC '16: King Modulus

---

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

---

Atharva hates modulo (long story). Due to this hate, he learned everything possible about modulo and has been self-named King Modulus. He wants you to share his frustration of modulo by giving you a task. Given two integers  $N$  and  $M$ , find the value of  $N \bmod M$ . The answer for  $N \bmod M$  can be viewed as the remainder of a division, where  $N$  is the dividend and  $M$  is the divisor. The result of a modulo operation is always non-negative. Here is an example of how the modulo operation works:

$$N \bmod M = (N - M) \bmod M = (N - 2M) \bmod M = \dots = (N + M) \bmod M = (N + 2M) \bmod M = \dots$$

For example,  $7 \bmod 4$  is:

$$7 \bmod 4 = 3 \bmod 4 = -1 \bmod 4 = \dots = 11 \bmod 4 = 15 \bmod 4 = \dots = 3$$

## Input Specification

---

A single line containing  $N$  and  $M$  separated by a single space.

$$-10^9 \leq N \leq 10^9$$

$$1 \leq M \leq 10^6$$

## Output Specification

---

One line containing the result of  $N \bmod M$ .

## Sample Input 1

---

```
7 4
```

## Sample Output 1

---

```
3
```

## Sample Input 2

---

```
15 3
```

## Sample Output 2

---

0