

## Reverse Integer

Given a signed 32-bit integer  $x$ , return  $x$  *with its digits reversed*. If reversing  $x$  causes the value to go outside the signed 32-bit integer range  $[-2^{31}, 2^{31} - 1]$ , then return 0.

**Assume the environment does not allow you to store 64-bit integers (signed or unsigned).**

### Example 1:

**Input:**  $x = 123$

**Output:** 321

### Example 2:

**Input:**  $x = -123$

**Output:** -321

### Example 3:

**Input:**  $x = 120$

**Output:** 21

### Constraints:

- $-2^{31} \leq x \leq 2^{31} - 1$