**Instructions**

Given a number determine whether or not it is valid per the Luhn formula.

The [**Luhn algorithm**](https://en.wikipedia.org/wiki/Luhn_algorithm) is a simple checksum formula used to validate a variety of identification numbers, such as credit card numbers and Canadian Social Insurance Numbers.

The task is to check if a given string is valid.

**Validating a Number**

Strings of length 1 or less are not valid. Spaces are allowed in the input, but they should be stripped before checking. All other non-digit characters are disallowed.

**Example 1: valid credit card number**

4539 3195 0343 6467

The first step of the Luhn algorithm is to double every second digit, starting from the right. We will be doubling

4\_3\_ 3\_9\_ 0\_4\_ 6\_6\_

If doubling the number results in a number greater than 9 then subtract 9 from the product. The results of our doubling:

8569 6195 0383 3437

Then sum all of the digits:

8+5+6+9+6+1+9+5+0+3+8+3+3+4+3+7 = 80

If the sum is evenly divisible by 10, then the number is valid. This number is valid!

**Example 2: invalid credit card number**

8273 1232 7352 0569

Double the second digits, starting from the right

7253 2262 5312 0539

Sum the digits

7+2+5+3+2+2+6+2+5+3+1+2+0+5+3+9 = 57

57 is not evenly divisible by 10, so this number is not valid.