Find Digits

All topics

Div Mod

The modulo operation is one of the most primitive things along with arithmetic operations on integers. $a\%n$ or $a \ mod \ n$ is the remainder when a is divided by n.

if $a\%m == 0$ it means m divides a such that for some multiple k, $a = k.m$

Some of the properties are

$(a + b)\%n = (a\%n + b\%n)\%n$
$(a \times b)\%n = (a\%n \times b\%n)\%n$

This operation is very useful when computation involves very large numbers and to check correctness we usually perform computation under modulo operation, hence keeping variables in standard integer size limits.

Modulo operation is also useful useful in the following:

- Chinese Remainder Theorm
- Fast Modulo exponentiation
- Inverse modulo operation

Related challenge for **Div Mod**

Sherlock and The Beast

Success Rate: **82.01%** Max Score: **30** Difficulty:

Solve Challenge

Integer to Array

You are given an integer and you want to perform operations on its digits. In modern scripting languages it can just be done by converting it to a string and then putting the characters into a list.

In order to do this efficiently, we can take all the digits and place them in an array.

```
arr[100] = {0};
i = 0
while ( n != 0) {
    arr[i] = n%10;
    n /= 10;
    i++;
}
```

This way arr contains all the digits of integer n.

Related challenge for **Integer to Array**

Modified Kaprekar Numbers

Success Rate: **87.31%** Max Score: **30** Difficulty:

Solve Challenge