Modulus

Whole Numbers

int

+ − *

0.123 0 Decimal 123

double float

int divison 4 mod 3 = 1

$\frac{3}{3} = 1$ $\frac{4}{3} = 1$ R: 1

Remainder

$\frac{999,999}{100,000} = 9$ R: 99,999

999,999 % 100,000 = 99,999

$X \% y = n$

n can be any number from 0 to y-1

y is a divisor of x when x % y == 0

4 % 3 = 1
5 % 3 = 2
6 % 3 = 0 ←

even odd

n %2==0 (even)

(odd) n %2 ==1 ||n%2 !=0

$0,1,2 \ \%3$ $\quad \%0\ 2^{0,1}$ $\quad f(sn)=$

sn 1, 2, 3, 4, 5, 6, 7, 8, ...

f(sn)= 1 2 3 1 2 3 1 2 . . .

propose $f(sn)=sn\%3$

1 2 0 1 2 0 1 2 . . .

f(k)= 0 1 2 0 1 2 0 1 . . .

Algorithm

$k=sn-1$

$(1-1)\%3=0$

$(2-1)\%3=1$

$(3-1)\%3=2$

$f(sn)=((sn-1)^{0}\%3)+1$

$$x \overset{+}{*} y = z$$

$$z - y = x$$

$$z - x = y$$

$x \div y = z$

$z \quad x \quad = y$

$z \quad y \quad = x$