Integer Functions and Elementary Number Theory

January 31, 2021

$\lfloor x \rfloor$ = the greatest integer less than or equal to x (the *floor* of x).
$\lceil x \rceil$ = the smallest integer greater than or equal to x (the *ceiling* of x).
$\lfloor x \rfloor = \lceil x \rceil$ if and only if x is integer.
$\lceil x \rceil = 1 + \lfloor x \rfloor$ if and only if x is not an integer.
$\lfloor -x \rfloor = -\lceil x \rceil$; $x - 1 < \lfloor x \rfloor \leq x \leq \lceil x \rceil < x + 1$
Congruence
$x \equiv y$ (module z)
$x \perp y$ x and y are relatively prime. i.e gcd is 1.
The 4 Laws.