

# Number System

Natural Numbers

1, 2, 3, 4, ...  $\infty$

Whole Numbers

0, 1, 2, ...

Integers

positive ; negative whole #s

-3, -2, -1, 0, 1, 2, 3, ...

Rational Numbers

#s that can be expressed as fractions

$\frac{1}{2}, \frac{1}{3}, .\bar{3}, \frac{22}{7}, 3.14$

Irrational Numbers

cannot be written as fractions

$\sqrt{2}$        $\pi, e$        $\sqrt{48}$        $\sqrt{11}$

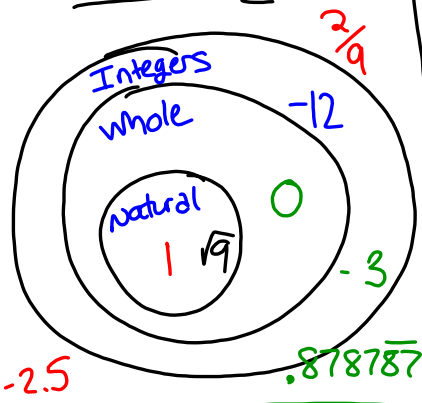
$\sqrt{-16}$  is imaginary

Imaginary #s  
 $\sqrt{-1} = i$

Real Numbers

Rational

Irrational



$\sqrt{5}$

~~$\frac{2}{9}$~~   
~~-2.5~~

~~-12~~

~~$\sqrt{5}$~~

$\sqrt{9}$

+

$-15/3$ : rational, integer

$\sqrt{25}$ : rational, integer, whole, natural

$-7/8$ : rational

$2/3$ : rational

$\sqrt{64}$ : rational, integer, whole, natural

4.5: rational

0.12345678910111213141516...: irrational

$\sqrt{5}$ : irrational