

$$\sqrt{1-1}$$

$$\sqrt{16}$$

$$4 \cdot 4$$

$$\sqrt{-25}$$

$$5 \cdot 5 \\ -5 \cdot -5$$

SQUARE ROOTS:

Radical symbol – the square root sign

Radicand – the expression under the radical sign

***** Square roots are always positive so you can never have a negative # as the radicand.**

If the square root is an integer is called a perfect square :

***** List square roots and perfect squares for 1 – 12: *****

REAL NUMBERS:

Natural Numbers – Positive #s starting from 1. Do not have any decimals or fractions. 1, 2, 3 . . .

Whole Numbers – Positive #s starting from 0. Do not have any decimals or fractions. 0, 1, 2, 3 . .

Integers – Positive AND negative #s. Do not have any decimals or fractions. . . -3, -2, -1, 0, 1, 2, 3 . . .

Rational number - Any # that can be written as

$$\frac{a}{b}$$

$$\frac{3}{4}$$

a and *b* are integers

A rational number terminates (ends) or repeats.

Integers in fraction form is written as:

$$\frac{5}{1} = 5 = 5$$

Examples: 4 -12 2.1 7

$\frac{\quad}{5}$

3.222222

$$\frac{2.1}{1} \quad 2\frac{1}{10} = \frac{21}{10}$$

.01001000100001

.001001001001

Irrational Numbers – A number that does not end or repeat.

pi

Real Numbers – are rational and irrational numbers together. This covers all numbers.

*** Show a number line and order numbers using radicals, fractions, percent and decimals. ***

Real #s
/ \
rational + irrational

INEQUALITY SIGNS:

Read it just like a book; that is, from left to right.

< less than $6 < 7$

> greater than $9 > 6$

\leq less than or equal to

\geq greater than or equal to

Graph inequalities on a number line.

Opposite:

multiply by -1

$$4 = -4$$

$$\frac{5}{3} = -\frac{5}{3}$$

Reciprocal/inverse

$$\frac{5}{3} = \frac{3}{5}$$

$$\frac{2}{1} \cdot \frac{1}{2}$$

What groups of #s
does this belong to?

$$\sqrt{4} \quad \sqrt{6} \quad \sqrt{9}$$

$$2 \quad \downarrow \quad 3$$

Absolute Value: The number inside the absolute value symbols is positive. Let's do #59 - 64 on p. 16.

$$|2| = 2$$

$$-|-6| = -6$$

$$|-4| = 4$$

$$-|8| = -8$$

