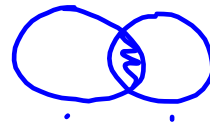
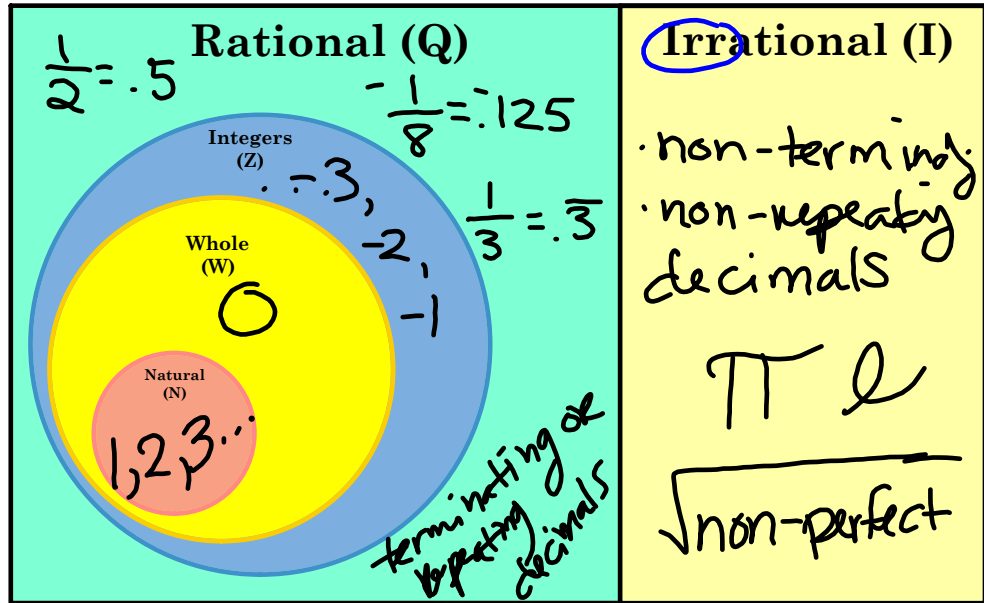


# Chapter 1A

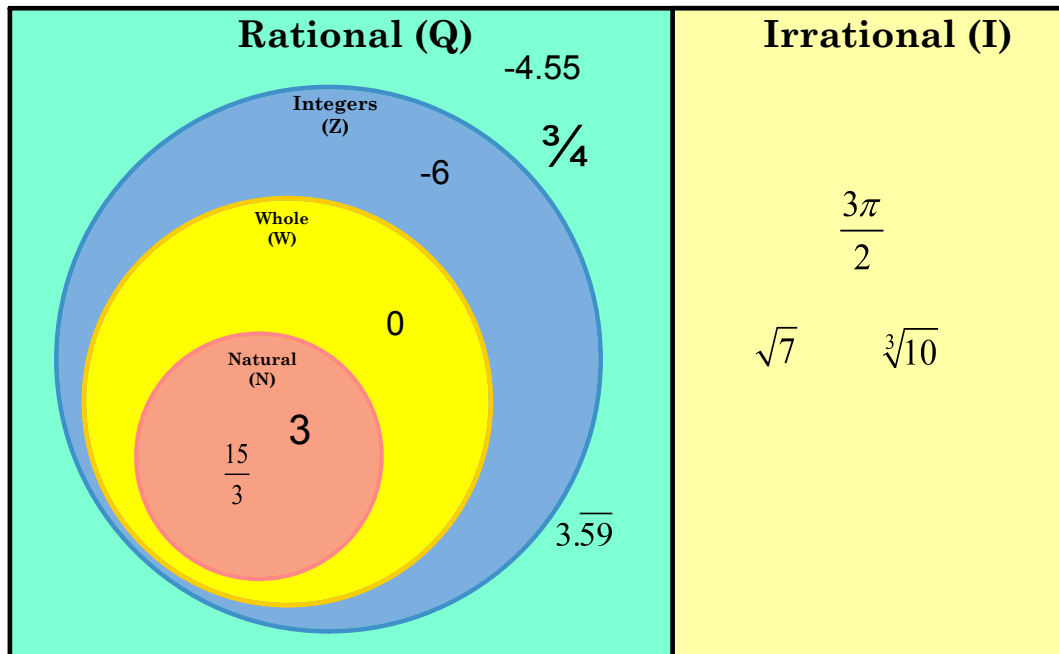
- Number Sets
- Solving Equations
- Solving Absolute Value Equations
- No CCSS



## Real Numbers (R)



## Real Numbers (R)



## Examples:

1. Name the sets of numbers to which each number belongs.

a.  $-\frac{2}{3}$       b.  $9.9999\dots$       c.  $\sqrt{6}$       d.  $\sqrt{100}$

2. Give an example of each type of number.

a. integer that is not a natural.

b. rational, but not a N, W, or Z

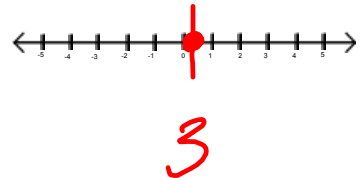
c. irrational

d. W that is not a N.

## Solving Equations

- use inverse operations to isolate the variable.
- check answers by plugging answer back into original equation.
- answers are given in a solution set { solution } or on a number line.

$$x = 3 \quad \{3\}$$



Examples.

Solve the following equations.

a.  $53 = 3(y - 2) - 2(3y - 1)$

$$53 = 3y - 6 - 6y + 2$$

$$53 = -3y - 4$$

$$57 = -3y$$

$$-19 = y$$

b.  $4(4m + 5) = \frac{4}{9} \cdot 9$

$$36m + 45 = 4$$

$$36m = -41$$

$$m = \frac{-41}{36}$$

4. Solve for the desired variable.

a.  $4y - 2n = 9$ , solve for  $y$

$$4y = 9 + 2n$$

$$y = \frac{9 + 2n}{4} = \frac{9}{4} + \frac{1}{2}n$$

b.  $A = \frac{1}{2}h(a + b)$ , solve for  $b$

$$2A = h(a + b)$$

c.  $x = \frac{-b}{2a}$ , solve for  $a$ .

$$2ax = -b$$

$$a = \frac{-b}{2x}$$

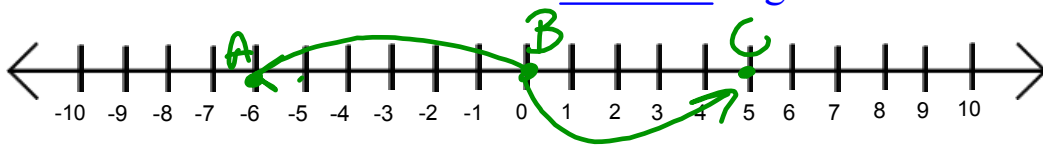
$$\frac{2A}{h} = a + b$$

$$\frac{2A}{h} - a = b$$

## Absolute Value Equations

**absolute value** = the distance a number is away from zero on the number line.

- absolute value is distance so it's **NEVER** negative.



1.  $|A| = 6$

4.  $|6| = 6$

7.  $|x| = 5$  5, -5

2.  $|B| = 0$

5.  $|-3| = 3$

8.  $|x+1| = 5$  4, -6

3.  $|C| = 5$

6.  $|4-9| = 5$

9.  $|x-2| = 4$

$| -5 |$

$x+1=5$   
 $x=4$

or  $x+1=-5$   
 $x=-6$

$x-2=4$   $x=6$   
 $x-2=-4$   $x=-2$

