

Order of Operations - PEMDAS

1. **P**arenthesis (solve number sentence inside grouping)
2. **E**xponent (find value of all powers)
3. **M**ultiplication and **D**ivision (left to right)
4. **A**ddition and **S**ubtraction (left to right)

Prime Factorization

Make a factor tree
Circle prime number

Divisibility Rules

A number is able to be divided by...

2	If the last digit is even.
3	If the sum of the digits can be divided by 3.
5	If the last digit is 0 or 5.
10	If the last digit is 0.

Comparing and Ordering Numbers

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

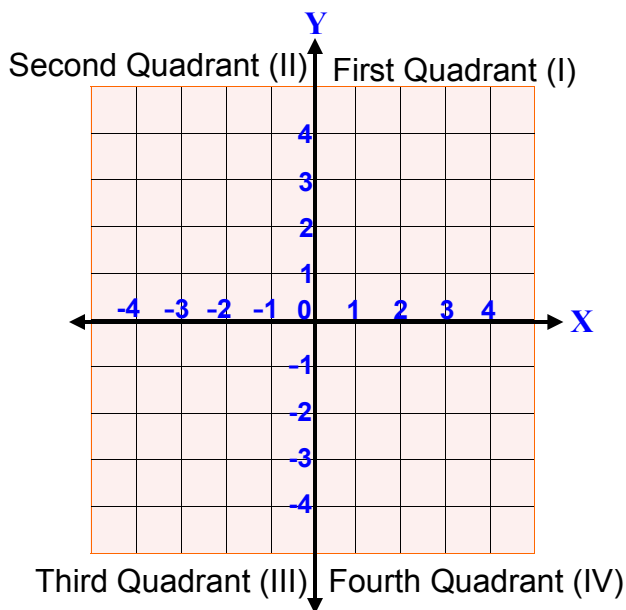
Equal to each other

$$\underline{\hspace{2cm}} < \underline{\hspace{2cm}}$$

Smaller number < Larger number

$$\underline{\hspace{2cm}} > \underline{\hspace{2cm}}$$

Larger Number > Smaller Number



(x, y)

Use x axis first left or right
Use y axis next up or down
Point Plot

Measurements

3 feet = 1 yard
5,280 feet = 1 mile
60 seconds = 1 minute
60 minutes = 1 hour

Operations & Fractions

Addition

- Need a common denominator
- What I do to the bottom I do to the top
- Add fractions first
- Add whole numbers
- Simplify the answer

Subtraction

- Need a common denominator
- What I do to the bottom I do to the top
- When needed borrow or rename your whole number
- Subtract fractions first
- Subtract whole numbers last (box out)
- Borrow or rename whole numbers when necessary
- Simplify the answer

Multiplication

- Whole numbers go over 1
- Mixed numbers need to be made into improper fractions
- Multiply across
- Reduce/Simplify the answer

Comparing Fractions

1. Find least common denominator (LCD) of the fractions
2. Rewrite each fraction as an equivalent fraction using the LCD
3. Compare the numerators

Mixed Number to Improper Fraction

1. Multiply the whole number by the denominator
2. Add the numerator
3. Answer becomes numerator
4. Denominator stays the same as original number

Improper Fraction to a Mixed number

1. Divide numerator by the denominator
2. Write remainder as a fraction

Word Problem Knowledge			
ADD	SUBTRACT	MULTIPLY	DIVIDE
sum total all together	difference minus how many more	product times double	quotient per average each

Solving Proportions

1. Write the proportion using two equal fraction.
2. Cross multiply.
3. Divide by the number with the variable.

Solving Equations with Variables

- To undo Addition you Subtract
- To undo Subtraction you Add
- To undo Multiplication you Divide
- To undo Division you Multiply

Place value chart											
Millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths	Ten-thousandths

Percent to Decimal

1. Trade percent sign for decimal point.
2. Move two places to the left.

Decimals to Percent

1. Move decimal two places to the right.
2. Add percent sign.

Percent to Fraction

1. Place number over 100.
2. Reduce if possible.