

## Fractions

(+) (-)

**Add -or- Subtract:** find Common Denominator

(x)

**Multiplying:** multiply Numerators then multiply Denominators

(÷)

**Dividing:** Keep, Change, Flip

$\frac{\text{Numerator}}{\text{Denominator}} \frac{a}{b} \leftarrow \text{Reciprocal} \rightarrow \frac{b}{a}$

## Percents

Decimal to a percent  $\rightarrow$  2 spots Right (Gets bigger)

Percent to a decimal  $\rightarrow$  2 spots Left (Gets smaller)

Percent to a fraction =  $\frac{\%}{100}$

$\frac{\text{is}}{\text{of}} = \frac{\%}{100}$       $\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$

**CUBES**

Unit Rate, Each, Per = 1

## Place Value

Thousands	Hundreds	Tens	Ones	Decimal	Tenths	Hundredths	Thousandths
				.			

## Ratios, Rates

Red Cars			X
Blue Cars			

### Proportion Box

$\frac{A + V + E + R + A + G + E}{7}$

$\frac{M + E + A + N}{4}$

## Add Words

In all  
Altogether  
Combined  
Together  
Total  
Plus  
Joined  
Both  
And  
More  
Sum  
Gain  
Raise  
Increased by  
Increase of

## Subtract Words

Left  
Less  
Minus  
Difference  
Decrease by  
Take away  
Change  
Loss  
Fewer  
Profit  
Off  
Not  
Away From

## Multiply Words

Multiplication  
Product  
Of  
Times  
Twice  
Double  
Triple  
Percent Of  
Fraction Of  
Multiple

## Divide Words

Quotient  
Divided  
Split  
Per  
Cut up  
Divided into

## Order of Operations Mnemonics

Please Excuse My Dear Aunt Sally.

Parenthesis ( )

Exponents  $5^2$

Multiplication

Division

Addition

Subtraction

Use whichever one comes first.

Use whichever one comes first.

X ÷ + -

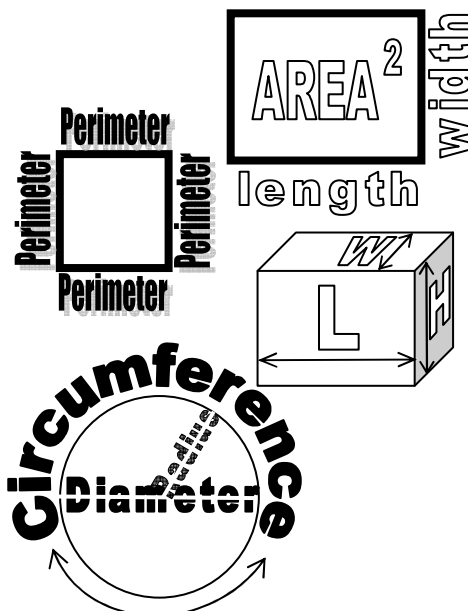


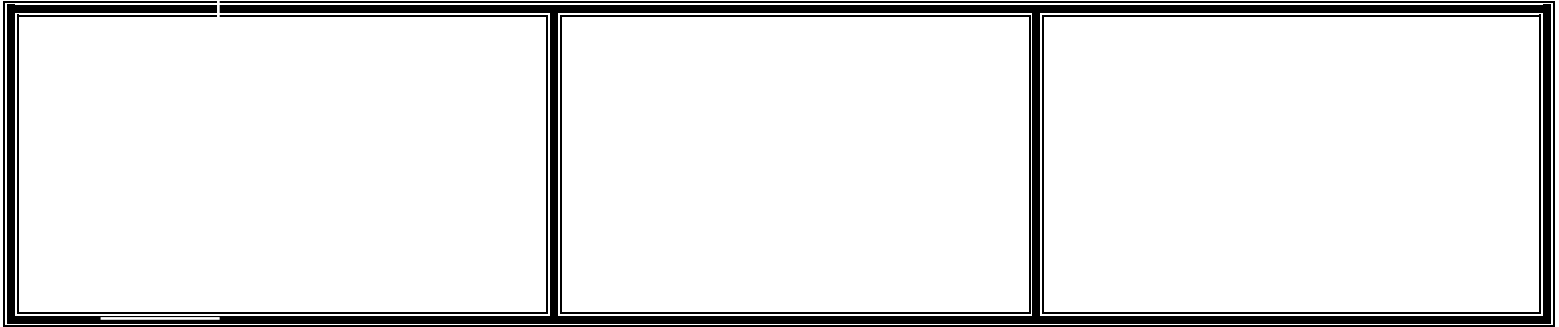
## Decimals

**(+)add or (-)subtract**  
Line them up!

**(X)multiply decimals**  
Add up places in problem and move it in the answer

**(÷) divide decimals**  
no decimal in Denominator





<b>X</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
<b>1</b>	1	2	3	4	5	6	7	8	9	10	11	12
<b>2</b>	2	4	6	8	10	12	14	16	18	20	22	24
<b>3</b>	3	6	9	12	15	18	21	24	27	30	33	36
<b>4</b>	4	8	12	16	20	24	28	32	36	40	44	48
<b>5</b>	5	10	15	20	25	30	35	40	45	50	55	60
<b>6</b>	6	12	18	24	30	36	42	48	54	60	66	72
<b>7</b>	7	14	21	28	35	42	49	56	63	70	77	84
<b>8</b>	8	16	24	32	40	48	56	64	72	80	88	96
<b>9</b>	9	18	27	36	45	54	63	72	81	90	99	108
<b>10</b>	10	20	30	40	50	60	70	80	90	100	110	120
<b>11</b>	11	22	33	44	55	66	77	88	99	110	121	132
<b>12</b>	12	24	36	48	60	72	84	96	108	120	132	144