BEDMAS

• Brackets • Exponents • Division • Multiplication • Addition •Subtraction

Brackets *Operations within brackets should be done first if there is two sets of brackets, solve the inside brackets then the outside.*
Exponents *refer to squared numbers and squared roots* - A number that amplifies another number Ex: 3^3 OR $\sqrt[3]{}$

Place Value

Tens Ones. Tenths Hundredths Thousandths Ten Thousandths Hundred Thousandths

Calculator keys

Squared x^2	Exponent x^x	Negative (-) or $^+$/-
square Root √□	Root *shift* +x□	Fractions - ▬/□

Brackets **(** OR **)**

Buttons will vary depending on your calculator

Squared Numbers and Square Roots

Squared Numbers - Multiplying a number by itself
Square Roots - Determining which number multiplied by itself equals the number under the square root sign.

Fractions: Part of a whole.

Numerator is the top number	Denominator is the bottom
Multiplying Fractions multiply the numerators and then multiply the denominators , then simplify	**Dividing** invert the second fraction and multiply.

Adding/Subtracting Fractions
If the denominator is the same , add or subtract the numerators.
If the denominator is different then find the least common multiple between the denominators and use that for the denominator.
Multiply both numerator and denominator by the value needed to obtain the common denominator.

Denominator is how many there are as a whole. Numerator is how many there are FROM the denominator.

Probability

Certain *1:1, 100%, 1, 1/1* chance	Likely *0% and 100%*
Unlikely *0 to 1*	Impossible *0:1, 0%, 0, 0/1* chance

Formal probability rule:
All range between 0 and 1 (or 0% and 100%) always

Statistics

Statistics To help find patterns and relationships in data.

Data Information with context

Quantitative Variable Results in numbers with units where taking an average makes sense. *Charts, graphs, plots* **spread = smallest value to biggest value**

Categorial Variables Results in information placed into groups or categories. (the count ÷ the total * 100 = the %

Integers

Integers- are whole numbers *(not decimals)* positive, negative, or zero *Example*: 4 , -7 , 0

Integers on a number line The larger the number, positive or negative the **further** it is away from zero.

Absolute value of a number: is the distance away from zero. To represent the absolute value of a number, you write it like this |5|

Integers (cont)

Adding
*When you are adding **Positive** integers you move **right** on the number line.*
*3 + 4 = 7 ⇒ **3 →→→→ 7***
When adding **Negative** numbers , you move to the **left** on the number line*
5+(-2) = 3 ⇒ **3←← 5**

Subtracting
Subtraction is opposite of addition. Subtract a positive number count to the **left**. Subtract a negative number and count to the **right**.

Multiplying & Divinding
2 positive integers = A positive
2 negative integers = A positive.
2 integers with mixed signs = A negative.

Proportions and Ratios

Ratio: A way to describe the relationship between two numbers. *2:1 OR 2 to 1*

Proportions A way to describe the relationship between two numbers using a ratio or decimal.

Equivalent Ratios Look different but equal the same. *3:6=0.5 4/8 =0.5*

Scientific notation

230000000.00 = 2.3 x 10^8	.000000012 = 1.2 x 10^{-8}

Scientific notation is a way of writing really big or really small numbers Using the base number 10. When doing a small number the exponent is negative

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Calculator

Use this question to see if your calculator follows the order of operations.
25 - 3x6 = ?
If the answer 7, then it DOES follow the order of operations.
If the answer 132, then it does NOT.

Decimals

Decimals are like fractions, they are part of a whole.

To turn a fraction into a decimal, divide the numerator by the denominator.

To turn a decimal in to a fraction, place the decimal over its place value and then simplify. (find the common denominator with factoring.)

Decimal Rounding : How many decimal points do you want to keep?
Look at the number to the right of the value.
If the number is less than 5 keep it and drop the rest to the right.
If the number is greater than or equal to 5 then add 1 to the number and drop the remaining to the right.

Algebra Terms

Letters are used to represent missing numbers in an equation.

Constants Are the numbers in the equation.

Variables Are the letters in the equation.

Coefficient A number that is directly followed by a variable. Grouped like this we are to multiply

Mean and Median

Mean Mean = Average, Add all values and then divide by the number of values. x or a y with a bar over it.	**y=∑y/n**
Median The center, equal amount of units on each side First sort smallest to biggest then use the formula, Odd Median-=Middle value, in position. Even Median=Average of two middle numbers , average of values in position	**Odd (n+1/2)** **Even (n/2) and (n/2+1)**

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