

## 6<sup>th</sup> Grade Math Week #3: Expression and Equations

Order of Operations: This can be remembered as the acronym: PEMDAS which can easily be remembered as Please Excuse My Dear Aunt Sally. That phrase stands for Parentheses, Exponents, Multiply, Divide, Add, Subtract. This is the order that we need to solve large math equations. Let's try one:

Example:  $8 + (5)(4) - (6 + 10 / 2) + 44$

"P" is the first order. "P" is parentheses. Our parentheses are  $(5)(4)$  and  $(6 + 10 / 2)$ . Let's start with the first one:  $(5)(4)$  just means  $5 \times 4$  which equals 20 Next is:  $(6 + 10 / 2)$  with this "D" comes before "A" so we need to divide first:  $10 / 2 = 5$  then we "A" (add)  $6 + 5 = 11$

So now we are left with  $8 + 20 - 11 + 44$  Now we can go left from right.  $8 + 20 = 28$  then  $28 - 11 = 17$  then lastly:  $17 + 44 = \mathbf{61}$

Now we have solved the equation:  $8 + (5)(4) - (6 + 10 / 2) + 44 = \mathbf{61}$

Arithmetic to Algebraic Expressions:

Let's write some expressions with variables:

- Write an expression to represent 12 more than a.
  - If we want 12 more than a we are just going to add 12 so we would write this as  $a + 12$
- Write an expression to represent the sum of d and 9
  - Sum means we are going to add so we would write this as:  $d + 9 =$
- Write an expression to represent n minus 10
  - That's super easy because instead of spelling minus we are just going to use its math symbol:  $n - 10 =$
- Write an expression to represent 4 times t
  - Same as above – replace the word "times" with its symbol making this answer:  $4 \times t$ 
    - You can also write this as:  $4t$

Sometimes they will give you the value for the variable. For Example:  $5 - n$  at  $n = 1$  So this would really be  $5 - 1$  which equals 4 so our answer is 4.