**Notes Absolute Value Equations**

Recall the Absolute Value of a number is the distance it is from zero on a number line. Absolute Value is represented by | | to vertical bars around a number/expression.

To solve an Absolute Value Equation you need to

1. Isolate the Absolute Value Expression \(|expression| = number\)
2. Determine the type of number your absolute value expression is equal to
   a. If you are equal to a NEGATIVE NUMBER the answer is NO SOLUTION - Ø
   b. If you are equal to a POSITIVE NUMBER you will split into 2 equations (without absolute value bars), the expression equal to the number and the expression equal to the negative of the number, and then solve each equation for the variable.
      
      \[expression = number\] or \[expression = -(number)\]
   c. If you are equal to ZERO rewrite the equation without absolute value bars and solve for the variable.

Solve the following Equations

| EX1: \(|3x + 8| = 3\) | EX2: \(2|3x - 1| + 7 = 7\) |
EX3: $4|x - 2| + 7 = 3$

EX4: $-2|3x - 1| + 7 = 5$