

Solving Equations Review – Part 2!

Equations with Absolute Value

- It is possible to get a positive value as a final answer when taking the absolute value of **both** positive and negative values.
- Therefore, to make the absolute value bars disappear, we have to set up **two** equations, one for the _____ case and one for the _____ case.

For example:

$$|m - 9| = 4$$

Because of the absolute value bars, the quantity **m - 9** could be equal to either _____ or _____.

Solve it!

Set-Up #1

Set-Up #2

**Don't forget: If there is anything on the same side as the absolute value bars, we have to get rid of it first!*

Now try this:

$$|12 - p| + 4 = 9$$

Now can you make an equation representing the solutions shown on this number line?



What about a word problem?

Martha runs an average of 5 miles per day, give or take a 2.5 miles. Write and solve an equation to find the maximum and minimum distances she runs.

Name _____ Per. _____ Date _____

Replacement Sets

*****Key Idea: Plug 'n' chug!*****

- With these problems, we are picking from a pool of numbers called the _____.
- We plug each one into the given equation to see if it makes the equation _____.
- If it does, we include it in the collection of numbers called the _____.

For example:

Give the solution set for the equation $2x + 4 = 8$ for the replacement set $\{0, 1, 2, 3\}$

A few important reminders:

- A number can only be included in a solution set if it is included in the _____
- A solution set doesn't always have to have just one value; it can have _____, or even _____!

Feeling ready?! I'm sure you are! 😊