

Solving Absolute Value Equations Class Work

∞ **Quick Recall:** What is absolute value?

∞ **Can you solve each of these problems?! Be sure to write an equation to support your solution!**

1. The absolute value of a number is 8.

2. The absolute value of a number is -4.

3. The absolute value of the product of a number and 5 is 60.

4. One less than the absolute value of the difference between nine and some number is 21.

 **Try Some More Practice!**

5. $-3|2w - 10| = -57$

6. $|2x + 3| + 14 = 3x - 11$

Did you check your solutions? If not, make sure you go back and do so.

What do you notice?!

*** Beware of Extraneous Solutions:** A solution is extraneous if it produces an equation that is invalid in the real number system when substituted into the original equation.

 **Try Some More Practice!**

7. $2|y - 1| + 9 = 8y - 3$

8. $4x - |10 - x| = 8$

3-2-1 Sum it Up!

- ③ Describe (in no more than three *short* sentences) the process of solving *any* given absolute value equation. Make sure your description is clear enough that someone who is not in this class could follow along.

- ② There are many reasons why checking your work is essential for success! List any two of them.

- ① Solve this one final problem: $2|x - 2| - 2 = 6x$