

Name: _____

Solve these absolute value equations:

- First get the absolute value term by itself
- Make 2 equations (+ & -) w/o absolute value
- Solve each equation to get 2 solutions
- Check your solutions by plugging into the original absolute value equation

<u>Example:</u>	$ 2x + 5 - 3 = 8$
Isolate the absolute value:	$ 2x + 5 = 11$
Make 2 equations:	$2x + 5 = 11$ $2x + 5 = -11$
Solve each equation:	$2x = 6$ $2x = -16$
	$x = 3$ $x = -8$

1. $|x + 4| = 10$

2. $|x - 1.8| = 3.2$

3. $|3x - 1| = 14$

4. $|2y + 7| = 7$

5. $|y - 8| - 2 = 5$

6. $|x + 17| + 10 = 70$

7. $|x - 5| + 6 = 0$

8. $|x - 9| - 13 = -8$

9. $|5x + 2| - 4 = 18$

10. $|4 - y| = 7$

$$11. 3|x + 7| - 14 = 4$$

$$12. -2|y - 7| + 18 = 8$$

$$13. 2|6 - 2x| - 1 = 7$$

$$14. -5|4y - 11| - 3 = 12$$

$$15. \frac{1}{5}|x - 5| - 4 = 2$$

$$16. \frac{3}{4}|y + 2| = 6$$

Challenge:

$$17. |x + 3| = 3x + 1$$