


Day 10, Developing Homework: Absolute Value and Distributive Property (2 pages)

If you're still unsure how to find both solutions to an absolute value equation (remember there are almost always 2 solutions!) See below for an example. Write the example carefully into your notes. Try out the process with the problems below.

3-99. One way to solve absolute value equations is to think about “looking inside” the absolute value. The “inside” must be positive or negative, so you should solve the equation both ways. For example, you could record your steps as shown at right.

$$\begin{array}{ccc} & |5 - 2x| = 19 & \\ & \swarrow \quad \searrow & \\ 5 - 2x = 19 & & 5 - 2x = -19 \\ -2x = 14 & & -2x = -24 \\ x = -7 & & x = 12 \end{array}$$

Solve each equation. Be sure to find all possible answers and check your solutions. [Homework Help](#) 

5) $\left| \frac{n}{3} \right| = 2$

6) $|-4 + 5x| = 16$

7) $|-2r - 1| = 11$

8) $|1 - 5a| = 29$

9) $|-2n + 6| = 6$

10) $|v + 8| - 5 = 2$

Distributive Property: Solve for the variable.

1) $2(x + 5) = 16$

2) $3(t + 1) = 18$

3) $2(3y - 5) = 14$

4) $4(3t - 2) = 88$

Simplify each expression.

1) $5(6p^2 + 8p - 3)$

6) $5p^2(7p^2 - 9p + 3)$

2) $6d(7d^2 + 9dp + 3p^2)$

7) $3s(4s^2 - 9s - 5)$

3) $8s(4s^2 - 6sr - 2r^2)$

8) $5n^3(9n^2 - 4n - 2)$

4) $3k(9k + 6)$

9) $7d(9d - 5p)$

5) $3s^3(8s^2 + 5sg + 7g^2)$

10) $9r^2(7r^2 - 8r - 3)$