

Name: Key

Class:

Topic:

Date:

Main Ideas/Questions	Notes	
<p>What are the steps to solve an Absolute Value Equation?</p>	<ol style="list-style-type: none"> 1) Make sure the <u>absolute value expression</u> is <u>isolated</u>. 2) Set the "inside" equal to both positive and negative number from the other side of the equation. 3) Solve <u>both</u> equations. 4) Write your answer as a <u>solution set</u>. $x = \{ _, _ \}$ 	
<p>Examples</p> <p>Solve each equation. Write your answer as a solution set!</p>	<p>1. $x = 2$ $x = 2$ $x = -2$ $x = \{-2, 2\}$</p>	<p>2. $m = 14$ $m = 14$ $m = -14$ $m = \{-14, 14\}$</p>
	<p>3. $k = 11$ $k = 11$ $k = -11$ $k = \{-11, 11\}$</p>	<p>4. $y = 6$ $y = 6$ $y = -6$ $y = \{-6, 6\}$</p>
	<p>5. $5z = 40$ $\frac{5z}{5} = \frac{40}{5}$ $\frac{5z}{5} = \frac{-40}{5}$ $z = 8$ $z = -8$ $z = \{8, -8\}$</p>	<p>6. $-7a = 28$ $\frac{-7a}{-7} = \frac{28}{-7}$ $\frac{-7a}{-7} = \frac{-28}{-7}$ $a = -4$ $a = 4$ $a = \{-4, 4\}$</p>
	<p>7. $d+1 = 8$ $d+1 = 8$ $d+1 = -8$ $\frac{-1-1}{-1-1}$ $\frac{-1-1}{-1-1}$ $d = 7$ $d = -9$ $d = \{-9, 7\}$</p>	<p>8. $w-3 = 4$ $w-3 = 4$ $w-3 = -4$ $\frac{+3+3}{+3+3}$ $\frac{+3+3}{+3+3}$ $w = 7$ $w = -1$ $w = \{-1, 7\}$</p>
	<p>9. $4n+2 = 34$ $4n+2 = 34$ $4n+2 = -34$ $\frac{-2-2}{-2-2}$ $\frac{-2-2}{-2-2}$ $\frac{4n}{4}$ $\frac{4n}{4}$ $n = 8$ $n = -9$ $n = \{-9, 8\}$</p>	<p>10. $-2v-5 = 17$ $-2v-5 = 17$ $-2v-5 = -17$ $\frac{+5+5}{+5+5}$ $\frac{+5+5}{+5+5}$ $\frac{-2v}{-2}$ $\frac{-2v}{-2}$ $v = -11$ $v = 6$ $v = \{-11, 6\}$</p>

Main Ideas/Questions	Notes	
<p>What if there is "stuff" outside the Absolute Value Bars?</p>	<p>11. $c + 2 = 12$ $\begin{array}{r} -2 \quad -2 \\ c = 10 \\ c = \{-10, 10\} \end{array}$</p>	<p>12. $y - 8 = -5$ $\begin{array}{r} +8 \quad +8 \\ y = 3 \\ y = \{-3, 3\} \end{array}$</p>
<p>YOU MUST ISOLATE!!</p>	<p>13. $\frac{6 x }{6} = \frac{24}{6}$ $x = 4$ $x = \{-4, 4\}$</p>	<p>14. $\frac{-2 z+3 }{-2} = \frac{-14}{-2}$ $z+3 = 7$ $\begin{array}{l} z+3=7 \\ -3 \quad -3 \\ \hline z=4 \end{array} \quad \begin{array}{l} z+3=-7 \\ -3 \quad -3 \\ \hline z=-10 \end{array}$ $z = \{-10, 4\}$</p>
	<p>15. $2w-4 + 1 = 9$ $\begin{array}{r} -1 \quad -1 \\ 2w-4 = 8 \\ \begin{array}{l} 2w-4=8 \\ +4 \quad +4 \\ \hline 2w=12 \\ \frac{2w}{2} = \frac{12}{2} \\ w=6 \end{array} \quad \begin{array}{l} 2w-4=-8 \\ +4 \quad +4 \\ \hline 2w=-4 \\ \frac{2w}{2} = \frac{-4}{2} \\ w=-2 \end{array} \\ w = \{-2, 6\} \end{array}$</p>	<p>16. $-10 h+5 - 3 = -83$ $\begin{array}{r} +3 \quad +3 \\ -10 h+5 = -80 \\ h+5 = 8 \\ \begin{array}{l} h+5=8 \\ h+5=-8 \end{array} \\ h = \{3, -13\} \end{array}$</p>
	<p>17. $7 4n+8 - 6 = 106$ $\begin{array}{r} +6 \quad +6 \\ 7 4n+8 = 112 \\ 4n+8 = 16 \\ \begin{array}{l} 4n+8=16 \\ 4n=8 \\ n=2 \end{array} \quad \begin{array}{l} 4n+8=-16 \\ 4n=-24 \\ n=-6 \end{array} \\ n = \{-6, 2\} \end{array}$</p>	<p>18. $5 4r-4 - 9 = 31$ $\begin{array}{r} 5 4r-4 = 40 \\ 4r-4 = 8 \\ \begin{array}{l} 4r-4=8 \\ 4r=12 \\ r=3 \end{array} \quad \begin{array}{l} 4r-4=-8 \\ 4r=-4 \\ r=-1 \end{array} \\ r = \{-1, 3\} \end{array}$</p>
<p>Summary: <i>There are 2 solutions!</i></p>		