

**Unit 1 Day 11 Notes: Solving Equations with Absolute Value**

A-REI.11: I can explain why the  $x$ -coordinates of the points where the graphs of the equations  $y=f(x)$  and  $y=g(x)$  intersect are the solutions of the equation  $f(x)=g(x)$ ; find the solutions approximately. Include cases where  $f(x)$  and/or  $g(x)$  are absolute value functions.

**Absolute value: \*\* YOU WILL ALWAYS HAVE 2 ANSWERS! \*\***

<p>1. <math> x =10</math></p> <p>Answers: _____ &amp; _____</p>	<p>2. <math>2 x =16</math></p> <p>Answers: _____ &amp; _____</p>	<p>Steps</p> <ol style="list-style-type: none"> <li>1. <b>Isolate</b> the Abs. Value Bars.</li> <li>2. <b>Split</b> the equation into two (1 eq is pos, 1 eq is neg).</li> <li>3. <b>Solve</b> for each. 2 Answers!</li> </ol>
<p>3. <math> x+2 =7</math></p> <p>Answers: _____ &amp; _____</p>	<p>4. <math> x-4 =2</math></p> <p>Answers: _____ &amp; _____</p>	
<p>Check:</p>	<p>Check:</p>	
<p>5. <math> m+5 =-13</math></p> <p>Answers: _____ &amp; _____</p>	<p>6. <math> b-9 +7=14</math></p> <p>Answers: _____ &amp; _____</p>	
<p>Check:</p>	<p>Check:</p>	

7.  $|x - 4| + 5 = 20$

Answers: \_\_\_\_\_ & \_\_\_\_\_

Check:

8.  $7|w - 8| + 10 = 17$

Answers: \_\_\_\_\_ & \_\_\_\_\_

Check:

9.  $3|7 - p| + 20 = 15$

Answers: \_\_\_\_\_ & \_\_\_\_\_

Check:

10.  $-2|x + 1| + 4 = -4$

Answers: \_\_\_\_\_ & \_\_\_\_\_

Check: