

# Algebra I

## 4.7 Worksheet

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_ HOUR: \_\_\_\_\_

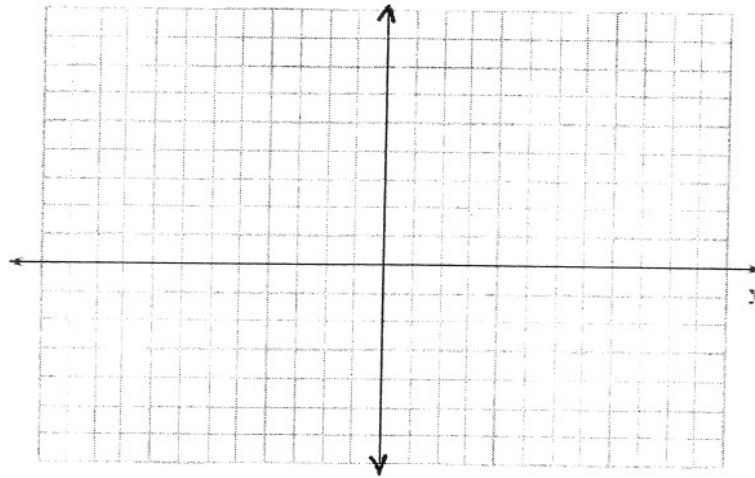
### Absolute Value Absolute Value Equations/Inequalities

Part I. Evaluate each expression.

1.  $|-2| =$
2.  $|2| =$
3.  $|-12| =$
4.  $|20| =$
5.  $|-0.2| =$
6.  $|-2 + 3| =$
7.  $|2| + |(-2)| =$
8.  $|-12 + 17| =$
9.  $|0| =$
10.  $|20 - 100| =$
11.  $|-0.2 + (-0.3)| =$
12.  $|7| + |(-8)| =$

Part II. Complete the table then graph the function.

x	$ x - 4 $
-3	7
-2	
-1	
0	
1	
2	
3	
4	
5	
6	
7	



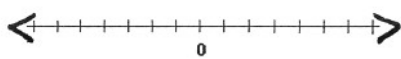
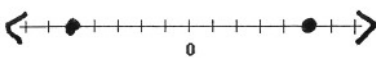
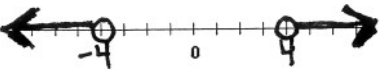
Part III. Solve then graph the solution to each equation or inequality.

*2 cases for each problem!*

1.  $|x| > 4$   
 $x > 4$  or  $x < -4$

2.  $|x| = 5$   
 $x = 5$  or  $x = -5$

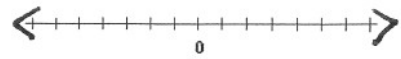
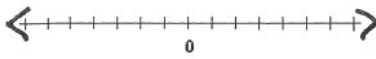
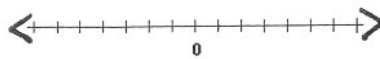
3.  $|x| \leq 2$



4.  $|x| \geq 3$

5.  $|x| < 2$

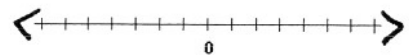
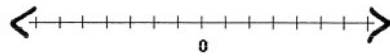
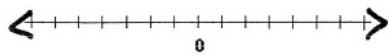
6.  $|x| = 3$



7.  $|x+1| > 4$   
 $x+1 > 4$  or  $x+1 < -4$

8.  $|x-1| = 5$   
 $x-1 = 5$  or  $x-1 = -5$

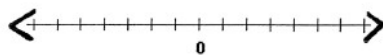
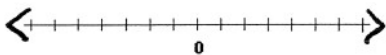
9.  $|x+2| \leq 2$



10.  $|x+2| \geq 3$

11.  $|x-2| = 2$

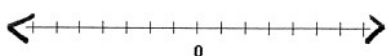
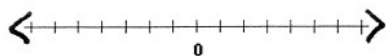
12.  $|x+1| \leq 3$



13.  $|2x-4| > 4$

14.  $|5x| = 5$

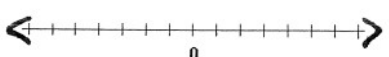
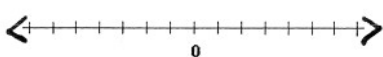
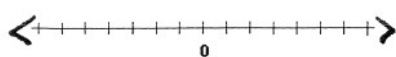
15.  $|4x+6| \leq 2$



16.  $|3x+6| \geq 3$

17.  $|4x-2| = 2$

18.  $|3x| \leq 3$



Hint: write out both cases then solve each case