Algebra 1 Name: _____

1.8 − 1.9 Worksheet | Inequalities and Absolute Value

Translate each statement into symbols.

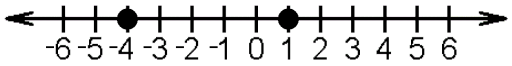
1. Seven is greater than negative one.

2. Five is less than nine.

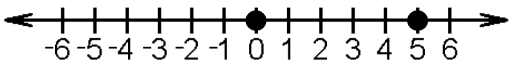
3. Negative four is less than zero.

4. Two is greater than negative eight.

State two inequalities, one with > and one with <, for the coordinates shown on the number line.

5. 

a. _____ b. _____

6. 

a. _____ b. _____

Fill in the statement with > or < to make the statement true.

7. −5 _____ 8

8. −3 _____ −6

9. 7 _____ 9 − 5

Translate the statement into a sentence.

10. 4 > −3

11. −2 < 0

12. Absolute value means _____.

Simplify.

13. $-(3+6)$

14. $-(11-4)$

15. $[-(-3)]+12$

16. $14-[-(-5)]$

17. $-(-2)+|-6|$

18. $10-|-4|$

19. $\left|\frac{3}{4}\right|+\left|-\frac{9}{4}\right|$

20. $\left|\frac{13}{2}\right|-\left|-\frac{3}{2}\right|$

21. $|8|-|-2|$

Translate each statement into symbols.

22. The absolute value of negative three is greater than two.

23. The opposite of negative four is greater than negative five.

Solve each equation. If there is no solution, explain why there is none, in a complete sentence.

24. $|x| = 6$

25. $|y| = -4$

26. $|a| = 3$

27. $|n| = -5$

Answer Key

1. $7 > -1$
2. $5 < 9$
3. $-4 < 0$
4. $2 > -8$

5a. $-4 < 1$

5b. $1 > -4$

6a. $0 < 5$

6b. $5 > 0$

7. <
8. >
9. >
10. Four is greater than negative three.
11. Negative two is less than zero.
12. Absolute value means distance from zero.

13. −9
14. −7
15. 15
16. 9
17. 8
18. 6
19. 3
20. 5
21. 6
22. $|-3| > 2$
23. $-(-4) > -5$
24. 6 or −6
25. There is no solution, because a number's distance from zero can't be negative.
26. 3 or −3
27. There is no solution, because a number's distance from zero can't be negative.