Keystone Review – Absolute Value & Inequalities

Name: _____ **Date:** _____

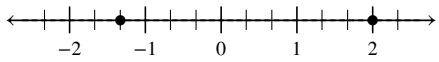
1. What is the solution set of the equation $|3 - 2x| = 5$?

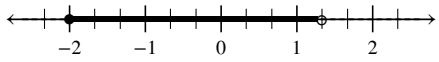
   A. $\{-1,\ 4\}$ B. $\{1,\ -4\}$

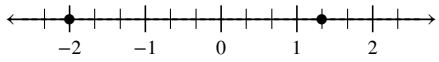
   C. $\{-1\}$ D. $\{4\}$

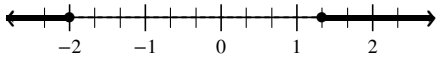
2. Solve for the *negative* value of x: $|2x - 8| = 18$

3. Which is a graph of the solution set of $|3x + 1| = 5$?

   A. 

   B. 

   C. 

   D. 

4. The inequality $3x + 2 > x + 8$ is equivalent to

   A. $x > -\frac{3}{2}$ B. $x > \frac{3}{2}$

   C. $x > 3$ D. $x < 3$

5. Which is the greatest integer that makes the inequality $3 - 2x > 9$ a true statement?

   A. -2 B. 2 C. 5 D. -4

6. If x is an integer, which is the solution set of $-1 \leq x < 2$?

   A. $\{0, 1\}$ B. $\{-1, 0, 1, 2\}$

   C. $\{0, 1, 2\}$ D. $\{-1, 0, 1\}$

7. When x is an integer, what is the solution set of $5 \leq x < 8$?

   A. $\{5, 6, 7, 8\}$ B. $\{5, 6, 7\}$

   C. $\{6, 7, 8\}$ D. $\{6, 7\}$

8. The solution set of $|x - 2| < 3$ is

   A. $\{x \mid x > 5\}$

   B. $\{x \mid x < -1\}$

   C. $\{x \mid -1 < x < 5\}$

   D. $\{x \mid x < -1 \text{ or } x > 5\}$

9. The solution set of $|2x - 5| \leq 11$ is

   A. $\{x \mid -5 \leq x \leq 22\}$

   B. $\{x \mid x \leq 8\}$

   C. $\{x \mid -3 \leq x \leq 8\}$

   D. $\{x \mid x \leq -3 \vee x \geq 8\}$

10. What is the solution set of $|4x + 8| > 16$?

A. $\{x \mid -6 < x < 2\}$

B. $\{x \mid -2 < x < 6\}$

C. $\{x \mid x < -6 \text{ or } x > 2\}$

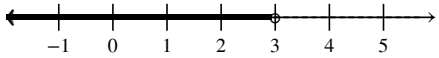
D. $\{x \mid x < -2 \text{ or } x > 6\}$

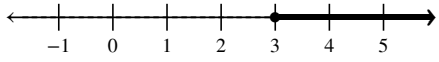
11. Which equation states that the temperature, t, in a room is less than 3° from 68°?

A. $|3 - t| < 68$ B. $|3 + t| < 68$

C. $|68 - t| < 3$ D. $|68 + t| < 3$

12. Which graph represent the solution of the inequality $2x + 3 > 9$?

A.


B.


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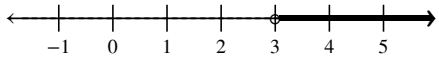
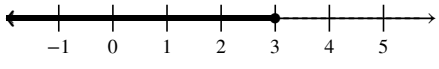
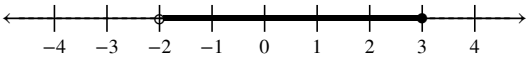


D.


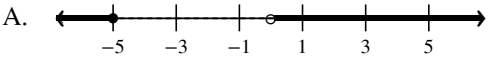
13. Which inequality is represented by the accompanying graph?



A. $-2 < x \leq 3$ B. $-2 \leq x \leq 3$

C. $-2 \leq x < 3$ D. $-2 < x < 3$

14. Which graph represents the open sentence $-5 \leq x < 0$?

A.


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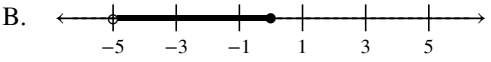

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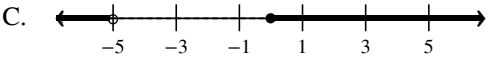
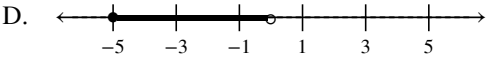
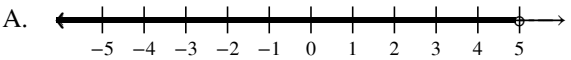


D.


15. Which is the graph of the solution set of $|2x - 1| < 9$?

A.


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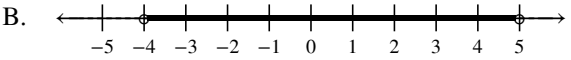

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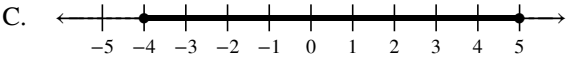
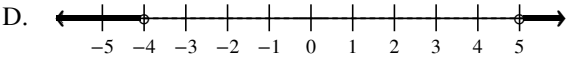
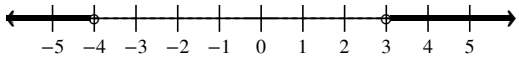


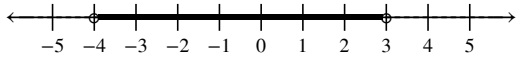
D.


16. Which graph represents the solution set of $|2x + 1| > 7$?

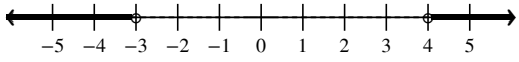
A.



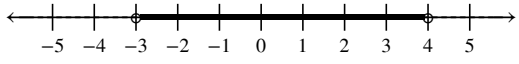
B.



C.



D.



Keystone Review – Absolute Value & Inequalities 11/01/2012

1.
Answer: A

2.
Answer: −5

3.
Answer: C

4.
Answer: C

5.
Answer: D

6.
Answer: D

7.
Answer: B

8.
Answer: C

9.
Answer: C

10.
Answer: C

11.
Answer: C

12.
Answer: C

13.
Answer: A

14.
Answer: D

15.
Answer: B

16.
Answer: A