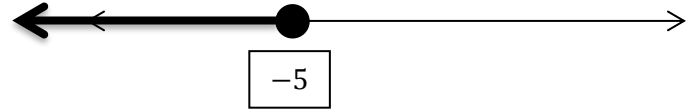


Name **Answers!**

Date \_\_\_\_\_ Period \_\_\_\_\_

**DIRECTIONS:** For #1-6, solve the inequality and write the ending solution on the blank provided. Then graph your solution on the provided number line. Show all work.

1.  $4x + 12 \leq -8$



$x \leq -5$

2.  $3(x + 5) > 4(2 + x) + 6$



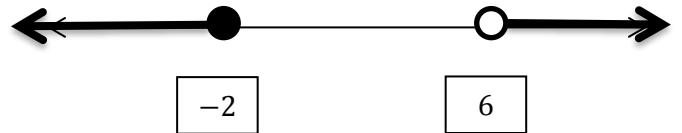
$x < 1$

3.  $-11 \leq 4x + 3 < 31$



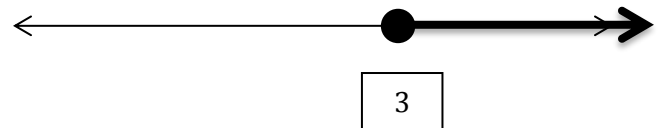
$-\frac{7}{2} \leq x < 7$

4.  $9x + 5 \leq -13$  or  $2x - 5 > 7$



$x \leq -2$  or  $x > 6$

5.  $x + 11 > 7$  and  $5x + 11 \geq 26$



$x \geq 3$

6.  $x + 6 < 4x < 3x + 9$



$2 < x < 9$

DIRECTIONS: For #7-10, answer the word problems. Show all work, *including the inequalities for which you are solving*. Write your answers in the provided blanks.

7. Find all sets of 3 consecutive integers whose sum is between 95 and 104.

**{31, 32, 33}; {32, 33, 34}; {33, 34, 35}**

8. The length of a rectangle is 2 feet more than three times the width. Find the largest possible width if the perimeter is at most 100 feet.

**12 feet**

9. For the Giraffes' 100 volleyball games next year, you can buy separate tickets for each match at \$8 each, or you can buy a season ticket for \$470. At most how many games could you attend at the \$8 price before spending more than the cost of a season ticket?

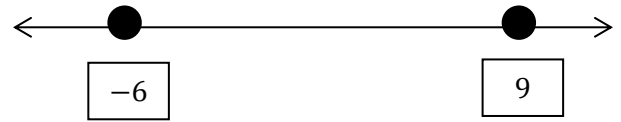
**58 games**

10. Garfield's first four test scores were 78, 89, 64, and 71. What score will Garfield need to get on the fifth test to have an average score between 75 and 80 inclusive?

**Between 73 and 98 (inclusive)**

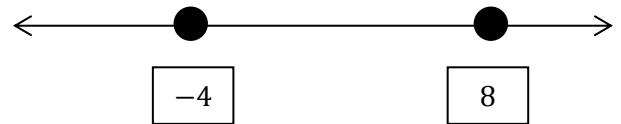
**DIRECTIONS:** For #11-12, solve the absolute value equations. Show all work and write your final answers in the provided blanks. Graph your solution on the provided number line.

11.  $|6 - 4x| = 30$



$x = -6, 9$

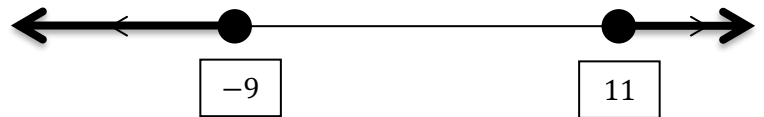
12.  $3|x - 2| - 10 = 8$



$x = -4, 8$

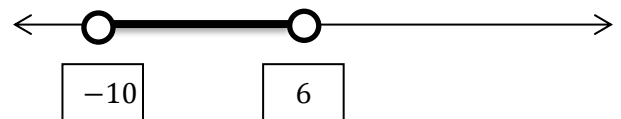
**DIRECTIONS:** For #13-15, solve the absolute value inequalities. Show all work and write your final answers in the provided blanks. Graph your solution on the provided number line.

13.  $5|x - 1| \geq 50$



$x \leq -9$  or  $x \geq 11$

14.  $|3x + 6| + 9 < 33$



$-10 < x < 6$

15. Write an absolute value inequality for which the answer is NO SOLUTION.

16. Write an absolute value inequality for which the answer is ALL REAL NUMBERS.

17. A disjunction features which of these words?      AND    OR

18. A conjunction features which of these words?      AND    OR