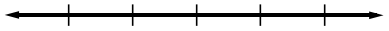
Name: _____ **Unit 1:** Equations & Inequalities

Date: _____ **Bell:** _____ **Homework 5:** Multi-Step & Compound Inequalities

**** This is a 2-page document! ****

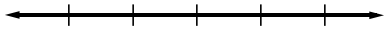
Directions: Solve, graph, and write the solution to each inequality in interval notation.

1. $-7a - 11 < 1 - 4a$



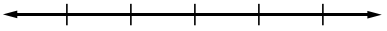
Interval Notation: _____

2. $5 - 9(8 - 2x) \leq 2x - 115$



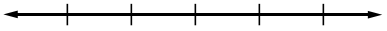
Interval Notation: _____

3. $-2(7 + y) \geq -8(y + 1)$



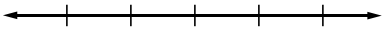
Interval Notation: _____

4. $-5(k + 4) > 2 - (3k + 6)$



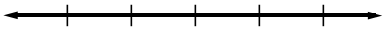
Interval Notation: _____

5. $\frac{3(2x+7)}{-3} > x + 1$



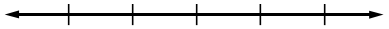
Interval Notation: _____

6. $r + 10 \leq -3(2r - 3) + 6(r + 3)$



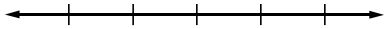
Interval Notation: _____

7. $-8m - 12 > -5(m - 8) - 3(m - 7)$



Interval Notation: _____

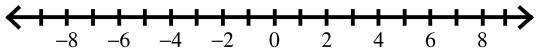
8. $18\left(q - \frac{3}{4}\right) \leq -2\left(q + \frac{7}{4}\right)$



Interval Notation: _____

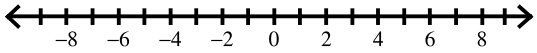
Directions: Solve, graph, and write the solution to each compound inequality in interval notation.

9. $-2x - 7 > 1$ or $x - 2 \geq -1$



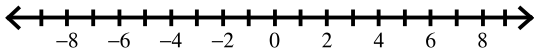
Interval Notation:

10. $\frac{a}{-2} < -1$ or $-4a + 3 \geq 23$



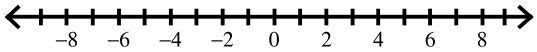
Interval Notation:

11. $6v + 38 \leq -4$ or $2(v + 3) \geq -2$



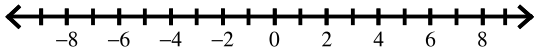
Interval Notation:

12. $4(1 - k) \geq -16$ or $7 - 6k < -41$



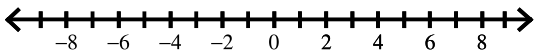
Interval Notation:

13. $10n - 9 > -59$ and $n - 6 \leq 3$



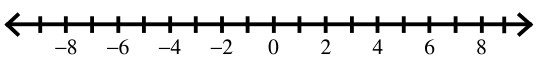
Interval Notation:

14. $-13 \leq 3 + 8p \leq 11$



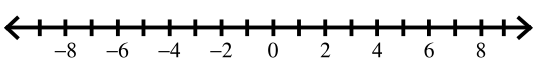
Interval Notation:

15. $37 > 7 - 6x > -17$



Interval Notation:

16. $3 \geq \frac{9 - w}{3} > 1$



Interval Notation: