

Name: \_\_\_\_\_

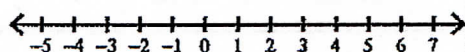
Unit 2: Equations &amp; Inequalities

Date: \_\_\_\_\_ Bell: \_\_\_\_\_

Homework 11: Compound Inequalities

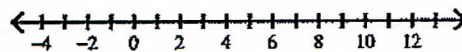
**Directions:** Solve, graph, and express the following compound inequalities in interval notation.

1.  $x + 1 \geq 3$  or  $x + 6 < 4$



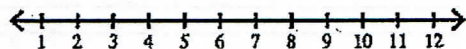
Interval Notation:

2.  $x - 10 \geq 0$  or  $x - 5 < -6$



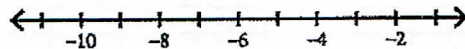
Interval Notation:

3.  $x + 9 \geq 16$  or  $x + 7 < 11$



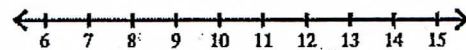
Interval Notation:

4.  $6x > -36$  or  $3x \leq -24$



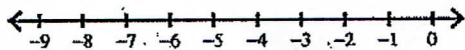
Interval Notation:

5.  $5x + 2 \geq 52$  or  $7 - x > -2$



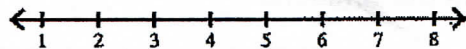
Interval Notation:

6.  $2x - 5 \geq -11$  or  $-10x - 6 > 44$



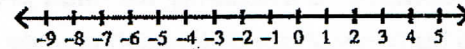
Interval Notation:

7.  $0 \leq x - 2 < 3$



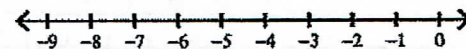
Interval Notation:

8.  $-24 \leq 2x - 10 < -6$



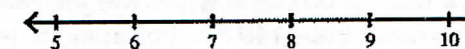
Interval Notation:

9.  $-53 < 9x + 1 < -26$



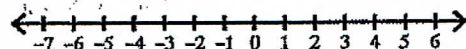
Interval Notation:

10.  $-47 > 1 - 8x > -63$



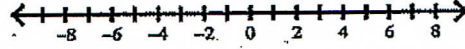
Interval Notation:

11.  $-61 < 9x - 7 < 29$



Interval Notation:

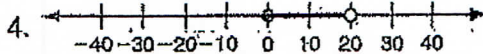
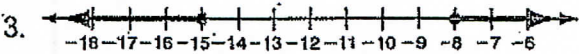
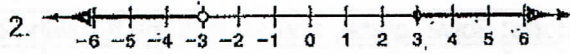
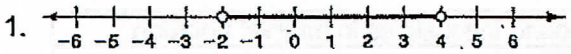
12.  $-39 \leq 5x - 9 \leq 16$



Interval Notation:

**LESSON 2.6** **Practice**  
**Solving Compound Inequalities**

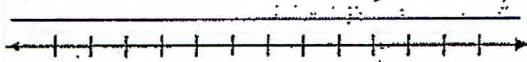
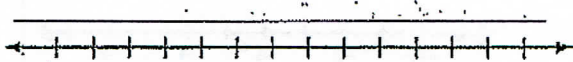
Write the compound inequality shown by each graph.



Solve each compound inequality and graph the solutions.

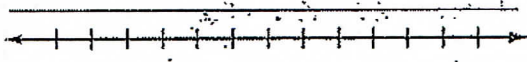
5.  $-15 < x - 8 < -4$

6.  $12 \leq 4n < 28$



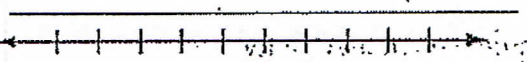
7.  $-2 \leq 3b + 7 \leq 13$

8.  $x - 3 < -3$  OR  $x - 3 \geq 3$



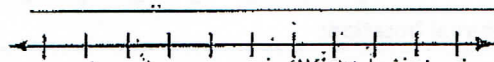
9.  $5k \leq -20$  OR  $2k \geq 8$

10.  $2s + 3 \leq 7$  OR  $3s + 5 > 26$

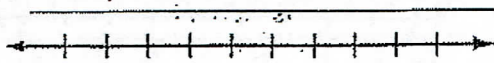


Write a compound inequality for each problem. Graph the solutions.

11. The human ear can distinguish sounds between 20 Hz and 20,000 Hz, inclusive.



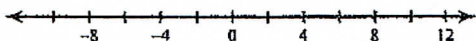
12. For a man to box as a welterweight, he must weigh more than 140 lbs, but at most 147 lbs.



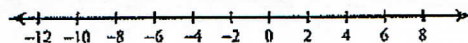
## Compound Inequalities

Solve each compound inequality and graph its solution.

1)  $m - 2 < -8$  or  $\frac{m}{8} > 1$



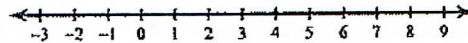
2)  $-1 < 9 + n < 17$



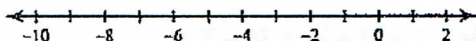
3)  $2x < 10$  or  $\frac{x}{2} \geq 3$



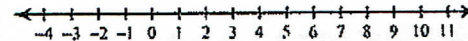
4)  $x + 8 \geq 9$  and  $\frac{x}{7} \leq 1$



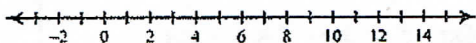
5)  $-3 \leq \frac{p}{2} < 0$



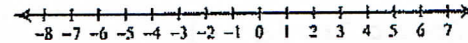
6)  $r + 5 \geq 12$  or  $\frac{r}{9} < 0$



7)  $7v - 5 \geq 65$  or  $-3v - 2 \geq -2$



8)  $-10b + 3 \leq -37$  or  $3b - 10 \leq -25$

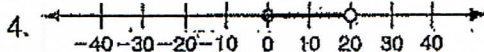
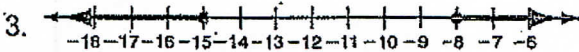
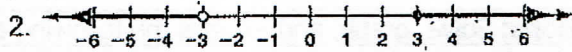
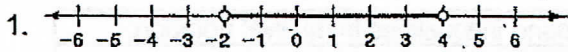




**LESSON**  
**2-6**

**Practice**  
**Solving Compound Inequalities**

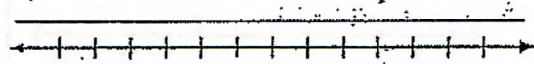
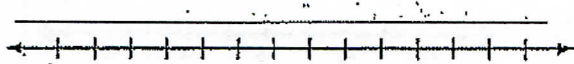
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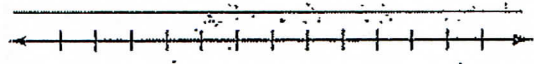
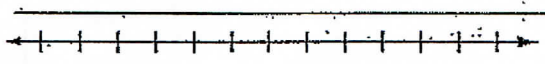
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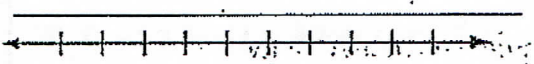
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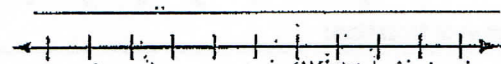
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