

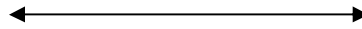
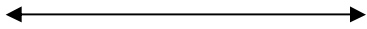
Name _____ Hr _____

3-6 Compound Inequalities

Solve each compound inequality. Graph if there is a number line.

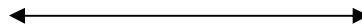
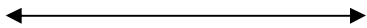
1. $-5 < x + 5 \leq 5$

2. $1 < 3x + 4 < 10$



3. $k - 3 \geq 1$ or $k - 3 < -1$

4. $b - 2 > 18$ or $3b < 54$



5. $-6 \leq -4d + 2 < 14$

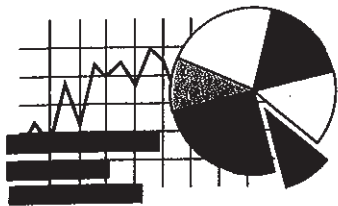
6. $2x + 1 > 7$ or $-x - 2 > 2$

7. $-1 < \frac{1}{2}x < 4$

Write and solve a compound inequality that represents each situation.

8.

The crowd that heard the President speak was estimated to be 10,000 people. The actual crowd could be 750 people more or less than this. What are the possible values for the actual crowd size?



Name _____

COMPOUNDING THE INEQUALITY

The union of two inequalities is indicated by an "or" statement.

Discounts are allowed for people under 5 or older than 55.

$$d < 5 \text{ or } d > 55$$



The intersection of two inequalities is indicated by an "and" statement.

Team members are older than 12 and younger than 21.

$$t > 12 \text{ and } t < 21 \quad 12 < t < 21$$



Graph the following compound inequalities.

1. $5 < n \leq 10$



3. $0 \leq n < 5$



5. $0 \leq n \leq 10$



2. $n < 5 \text{ or } n > 10$



4. $n \leq 10 \text{ or } n > 15$



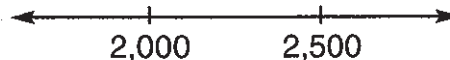
6. $n \leq 0 \text{ or } n \geq 10$



7. The team members must be between 60 and 72 inches tall.



9. The fund-raiser should bring in between \$2,000 and \$2,500.



8. A machine will not operate if part is less than 2.25 cm or greater than 2.75 cm.



10. No one took longer than 2 hr. to complete the test nor less than 1 hr.

