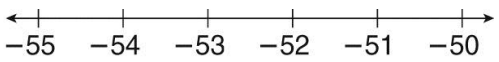
Name: _____ Hour: _____

11-4 Practice C
Solving Inequalities by Multiplying or Dividing

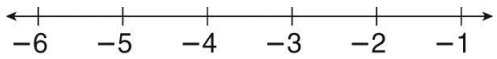
Solve and graph.

1. $18 \geq \frac{b}{-3}$

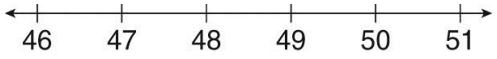


2. $6d > 42$

3. $5f < -15$

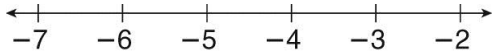


4. $24 \leq \frac{q}{2}$

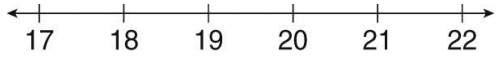


5. $-4 < \frac{h}{-2}$

6. $8j \geq -40$



7. $\frac{k}{6} \geq 3$



8. $-56 < -7m$

9. Keisha told her swim coach that she would swim at least half a mile. If one lap is 50 yards, what is the fewest number of laps she must swim?

10. Mr. Wallace measured the length of a board that he was going to cut into 16 equal parts. If each part had to be less than 4 inches long, how long could the board be?

Name: _____ Hour: _____

II-4 Challenge
Solving Inequalities by Multiplying or Dividing

Inequalities that have more than one inequality sign are compound inequalities. You can solve them the same way you solve other inequalities. But, you must check to be sure the solution makes sense.

Example 1

$4 < 2x < 10$

$\frac{4}{2} < \frac{2x}{2} < \frac{10}{2}$ Divide each part by 2.

$2 < x < 5$ This means that $x > 2$ and $x < 5$. That makes sense.

Example 2

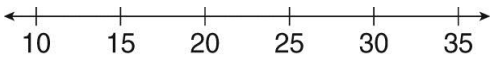
$$-4 \geq \frac{x}{-3} \geq 2$$

$-3 \bullet -4 \leq -3 \bullet \frac{x}{-3} \leq -3 \bullet 2$ Multiply each part by –3. Reverse the inequality symbols.

$12 \leq x \leq -6$ This means that $x \geq 12$ and $x \leq -6$. That does not make sense, so the inequality has no solution.

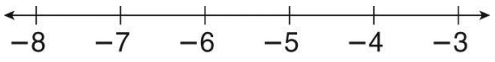
Solve and graph. If the inequality has no solution, write no solution.

1. $5 > \frac{x}{5} > 3$



2. $14 \leq 2y < 18$

3. $20 < -5z < 35$



4. $1 \leq \frac{b}{-2} < -2$