

3-6**Practice B**

Compound Inequalities

*Form K***Write a compound inequality that represents each phrase. Graph the solutions.**

1. All real numbers that are less than -3 or greater than or equal to 5 .

$$x < \boxed{\quad} \quad \boxed{\quad} \quad x \geq \boxed{\quad}$$

2. A certain recipe calls for a cake to bake between 25 minutes and 30 minutes, inclusive.

$$\boxed{\quad} \leq \boxed{\quad} \leq \boxed{\quad}$$

Solve each compound inequality. Graph your solutions.

3. $5 < k - 2 < 11$

4. $-4 > y + 2 > -10$

5. $6b - 1 \leq 213$ and $2b + 1 \geq 11$

6. $5 - m < 4$ or $7m > 35$

7. $3 > \frac{11 + k}{4} \geq -3$

8. $4 \leq y + 12 \leq 24$

Write each interval as an inequality. Then graph the solutions.

9. $(-2, 3]$

$$-2 \boxed{\quad} x \boxed{\quad} 3$$

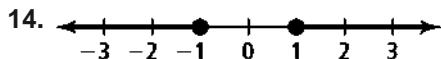
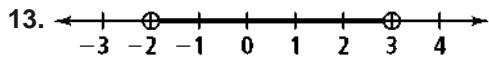
10. $[-2, 2]$

$$-2 \boxed{\quad} y \boxed{\quad} 2$$

11. $(-\infty, -1] \text{ or } (1, \infty)$

12. $[0, \infty)$

Write a compound inequality that each graph could represent.



Solve each compound inequality. Justify each step.

15. $3f + 3 < 6 \text{ or } 7f - 20 > 50$

16. $3 > -0.5h > -3$

17. $-\frac{1}{2} \leq \frac{5}{6}j - \frac{1}{3} \leq 2$

18. $-\frac{3}{2} \leq \frac{5}{6}k \text{ or } k - \frac{3}{4} \geq 2$

19. A family is comparing different DVD recorders. One unit can record up to eight hours. Another unit can record from two to 10 hours. A third unit can record up to 12 hours. Model these ranges on a number line. Represent each range of hours using interval notation.