Chapter 4

Extra Practice: Skills and Word Problems

Lessons 4-1 to 4-4 **Solve each inequality. Graph and check your solution.**

1. $-8w < 24$

2. $9 + p \leq 17$

3. $\frac{r}{4} > -1$

4. $7y + 2 \leq -8$

5. $t - 5 \geq -13$

6. $9h > -108$

7. $8w + 7 > 5$

8. $\frac{s}{6} \leq 3$

9. $\frac{6c}{5} \geq -12$

10. $-8\ell + 3.7 \leq 31.7$

11. $9 - t \leq 4$

12. $m + 4 \geq 8$

13. $y + 3 < 16$

14. $n - 6 \leq 8.5$

15. $12b - 5 > -29$

16. $4 - a > 15$

17. $4 - x \leq 3$

18. $1 - 4d \geq 4 - d$

19. $n + 7 \leq 3n - 1$

20. $\frac{s}{2} + 1 < s + 2$

21. $3 - \frac{2x}{3} > 5$

22. $8r - \frac{r}{6} > \frac{1}{6} - 8$

23. $1.4 + 2.4x < 0.6$

24. $x - 2 < 3x - 4$

25. The booster club raised \$102 in their car wash. They want to buy \$18 soccer balls for the soccer team. Write and solve an inequality to find how many soccer balls they can buy.

26. You earn \$7.50 per hour and need to earn \$35. Write and solve an inequality to find how many hours you must work.

Lesson 4-5 **Solve each compound inequality.**

27. $8 < w + 3 < 10$

28. $-6 < t - 1 < 6$

29. $6m - 15 \leq 9$ or $10m > 84$

30. $9j - 5j \geq 20$ and $8j > -36$

31. $37 < 3c + 7 < 43$

32. $3 < 5 + 6h < 10$

33. $1 + t < 4 < 2 + t$

34. $2 + 3w < -1 < 3w + 5$

35. $2x - 3 \leq x$ and $2x + 1 \geq x + 3$

36. $3n - 7 > n + 1$ or $4n - 5 < 3n - 3$

Lesson 4-6 **Choose a variable and write an absolute value inequality that represents each set of numbers.**

37. all real numbers less than 2 units from 0

38. all real numbers more than 0.5 units from 4.5

39. all real numbers less than 1 unit from -4

40. all real numbers 3 or more units from -1

41. all real numbers less than or equal to 5 units from 3

Solve each inequality. Graph and check your solution.

42. $|x| < 5$

43. $|t| > 1$

44. $|t| - 5 \leq 3$

45. $|-6m + 2| > 20$

46. $|3c| - 1 \geq 11$

47. $|8 - w| \leq 8$

48. $|2b + 3| < 7$

49. $|c - 5| \leq 6$

50. $|n| + 4 \leq 5$

51. Write an absolute value inequality that has numbers between 2 and 3 as the solutions.

52. Holes with radius 3 cm must be drilled in sheets of metal. The radius must have an error no more than 0.01 cm. Write an absolute value inequality whose solutions are acceptable radii.