Name, date, and period required to receive credit!

Name _____ Date _____ Period _____

Solving Compound Inequalities

Graph the solution set on a number line and write the answer in interval notation.

1. $-2 \le x < 7$

2. $0 < x < 9.3$

3. $-11 \le x \le -4$

4. $-9 < x \le 0$

5. $12 \le x < 23$

6. $-7 \le x < -2.5$

7. $30 > x > 20$

8. $-12 \ge x > -17$

9. $0 > x \ge -5$

Graph the solution set on a number line

10. $x < -2$ or $x \ge 5$

11. $x \le -12$ or $x \ge -7$

12. $x > 3$ or $x \ge 8$

13. $x < -11$ or $x < -3$

14. $x \ge -6$ or $x \le -13$

15. $x < 9$ or $x > 4$

16. $x \le 17$ or $x > 15$

17. $x \le 8$ or $x < 0$

18. $x > 19$ or $x \le 0$

Graph the solution set on a number line

19. $x < 8$ and $x \ge 5$

20. $x > 15$ and $x < 20$

21. $x < 3$ and $x \le 7$

22. $x \ge -10$ and $x \ge -12$

23. $x < -9$ and $x \ge 13$

24. $x < -25$ and $x \ge 50$

25. $x < -42$ and $x > -58$

26. $x < -24$ and $x \le -19$

27. $x \le 200$ and $x > 100$

Solve the inequalities.

28. $-2 \le x + 3 < 9$

29. $1 \le 2x + 1 < 11$

30. $-13 \le 3x + 2 \le 11$

31. $5 < 4x - 3 \le 21$

32. $-32 < 5x - 2 < -17$

33. $7 \le -2x + 3 \le 21$

34. $-3 \le -4x + 1 \le 25$

35. $0 \le -x + 3 \le 7$

36. $29 \le -6x + 5 \le 41$

Solve the inequalities.

37. $2x + 5 < -1$ or $-3x + 20 \le 2$

38. $-x + 8 > 1$ and $\frac{x}{3} + 5 > 6$

39. $5x - 3 > -13$ and $-2x + 4 > -6$

40. $3x - 2 \le 7$ or $-2x < -10$

41. $3x + 2 \ge 14$ and $-2x + 13 < 1$

42. $x + 5 < 8$ and $2x - 3 > 11$

43. $\frac{2}{3}x - \frac{3}{4} \le \frac{7}{12}$ or $x + 3 < 3$

44. $-2x - 7 > 15$ or $\frac{2}{3}x \le -4$

45. $2x + 1 \le -9$ and $\frac{x - 3}{2} > 1$

46. $-2x + 1 > -5$ and $3x + 4 \ge -2$

47. $x + 5 < 5$ or $5x - 2 \ge -12$

48. $3x - 1 > 14$ and $x - 2 \ge 5$

49. $-3x + 22 < 1$ or $-x > -2$

50. $x + 2 > -9$ or $3x \le -27$