Name _____   Date _____

Solve the inequality. Graph your solution.

1. $4x - 7 \geq 1$

2. $7p + 3 < -11$

3. $8 - 2n \geq 26$

4. $3(a - 4) \leq 33$

5. $6(y + 1) > 6$

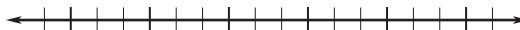**6.** $-2(c - 1) < -22$

7. $8m - 7 < 4m + 5$

8. $10 - 11d > -5d - 4$

9. $9z \leq -7z + 14$

10. $6w + 3 < 2w + 15$

Solve the inequality, if possible.

11. $6y - 9 \leq 4y + 2y - 16$

12. $7p - 11p + 3 \geq 3 - 4p$

13. $4(c - 5) < 2(c - 10)$

14. $5(a - 3) \leq 5a - 6$

15. $6(x - 8) > 6x - 48$

16. $2(3d - 4) < 4 + 6d - 15$

17. $4m + 14 - 2m \leq 2(m + 7)$

18. $-2(n - 3) \geq 1 - 2n + 5$

19. $4(3 - 2x) > 2(6 - 4x)$

20. $2(5 - a) > 4a + 13 - 6a$

21. $-4n + 11 < -4(n + 6)$

22. $3(5 - 6x) \leq 2(11 - 9x)$

23. $2m + 10 - 7m \leq 5(4 - m)$

24. $6(1 - 2n) \leq 5 - 12n$

| **LESSON** 5.3 | **Practice B** *continued*
 For use with the lesson "Solve Multi-Step Inequalities" |

Translate the verbal phrase into an inequality. Then solve the inequality and graph your solution.

25. Six more than 5 times a number x is greater than or equal to 31.

26. Twice the sum of 4 and x is less than -16.

27. The difference of $10x$ and $3x$ is less than or equal to the sum of $4x$ and 21.

28 . The sum of $2x$ and $4x$ is greater than or equal to the sum of $2x$ and 36.

29. The difference of $2x$ and 15 is less than or equal to the sum of $4x$ and 17.

30. **Weaving** A weaver spends $420 on supplies to make wall hangings and plans to sell the wall hangings for $80 each.

    a. Write an inequality that gives the possible numbers w of wall hangings the weaver needs to sell in order for the profit to be positive.

    b. What are the possible numbers of wall hangings the weaver needs to sell in order for the profit to be positive?

31. **School Spirit** Your club is in charge of making pins that students can buy to show their school spirit for the upcoming football game. You have made 225 pins so far, and you only have 2 hours left to make the rest of the pins. You need to make at least 400 pins.

    a. Write an inequality that gives the possible numbers p of pins you have to make per minute in order to exceed your goal.

    b. What are the possible numbers of pins you have to make per minute in order to exceed your goal?

32. **Aquarium** You are getting a larger aquarium for your neon tetra fish and you also want to add more neon tetras to the larger aquarium. The general rule is that each fish needs 2 gallons of water. You currently have 6 neon tetras. If you buy a 20-gallon aquarium, what are the possible numbers of additional fish you can put in your aquarium? *Explain* how you got your answer.