Practice 4-2

Solving Inequalities Using Addition and Subtraction

Solve each inequality. Check the solution.

1. $n - 7 \geq 2$

2. $10 + y > 12$

3. $3.2 < r + 4.7$

4. $7 + b > 13$

5. $n + \frac{3}{4} > \frac{1}{2}$

6. $-\frac{5}{7} \geq c + \frac{2}{7}$

7. $g + 4.6 < 5.9$

8. $0 > d - 2.7$

9. $f + 4 \geq 14$

10. $x + 1 \leq -3$

11. $d - 13 \leq -8$

12. $m - 7 \geq -8$

Write and solve an inequality that models each situation.

21. It will take at least 360 points for Kiko's team to win the math contest. The scores for Kiko's teammates were 94, 82, and 87, but one of Kiko's teammates lost 2 of those points for an incomplete answer. How many points must Kiko earn for her team to win the contest?

22. This season, Nora has 125 at-bats in softball. By the end of the season she wants to have at least 140 at-bats. How many more at-bats does Nora need to reach her goal?

23. The average wind speed increased 19 mi/h from 8 A.M. to noon. The average wind speed decreased 5 mi/h from noon to 4 P.M. At 4 P.M., the average wind speed was at least 32 mi/h. What is the minimum value of the average wind speed at 8 A.M.?

Practice 4-3

Solving Inequalities Using Multiplication and Division

Solve each inequality. Graph and check the solution.

1. $\frac{15}{8} \leq \frac{5}{2}s$

2. $60 \leq 12b$

3. $-\frac{4}{5}r < 8$

4. $\frac{5}{2} < \frac{n}{8}$

5. $-9n \geq -36$

6. $\frac{n}{7} \geq -6$

7. $-7c < 28$

8. $16d > -64$

9. $-\frac{t}{3} < -5$

10. $54 < -6k$

11. $\frac{w}{7} > 0$

12. $2.6v > 6.5$

Write and solve an inequality that models each situation.

21. Suppose you and a friend are working for a nursery planting trees. Together you can plant 8 trees per hour. What is the greatest number of hours that you and your friend would need to plant at most 40 trees?

22. Suppose the physics club is going on a field trip. Members will be riding in vans that will hold 7 people each including the driver. At least 28 people will be going on the field trip. What is the least number of vans needed to make the trip?

23. You need to buy stamps to mail some letters. The stamps cost $.34 each. What is the maximum number of stamps that you can buy with $3.84?