

## Section 9.3 Extra Practice

1. Explain how to verify that the solution to the inequality  $\frac{x}{2} - 2 \leq 6$  is  $x \leq 16$ .
2. Solve each inequality.
  - a)  $3x - 5 > 2x + 4$
  - b)  $4x + 3.2 < 2x + 1.4$
  - c)  $\frac{3}{4}x + 8 \leq \frac{1}{2}(3x - 5)$
  - d)  $6(5 - x) \leq 7(x - 5)$
3. Solve. Draw a number line to represent each solution.
  - a)  $9x + 4 \leq 5x + 12$
  - b)  $5x - 2 > 9x - 10$
  - c)  $3(2x - 3) < 13 + 2(x - 1)$
  - d)  $4(2x - 1) - 5(x + 1) \geq 9$
4. Verify each solution.
  - a)  $2x - 9 > 5x + 6; x < -5$
  - b)  $2\frac{2}{3}(x + 3) \leq 9 + 2(x + 4); x \leq 13\frac{1}{2}$
5. Your parents are celebrating their 25th wedding anniversary. They have compared the rates at two banquet halls. Fancy Feast charges \$200 for the hall plus \$30 per person. Beautiful Banquet charges \$400 for the hall plus \$20 per person.
  - a) Write an inequality to represent the number of people who could attend the celebration at Fancy Feast with a cost of no more than \$2000.
  - b) How many people need to attend to make Beautiful Banquet more cost efficient? Show your work.
6. The following are the wages for two summer jobs building grain bins.

Job A: \$60 per bin plus \$120 per day  
Job B: \$75 per bin plus \$90 per day

Write and solve an inequality to determine how many grain bins you would need to build each day to make Job B pay more than Job A.