**3-7A Lesson Master**

**SKILLS** Objective B

In 1–6, solve the inequality and check your answer. Show your work.

1. \(3w + 5 \leq 14\)  
2. \(\frac{2}{3}(1 - a) \geq 4\)  
3. \(10 < 1.7b + 3.5\)  
4. \(-\frac{1}{2}(4z - 30) + 2(6z - 50) \leq 68\)  
5. \(\frac{2}{3}k + \frac{3}{2} < \frac{1}{6}\)  
6. \(3 > 5r - 7(r + 1)\)

**USES** Objective D

7. The velocity, in feet per second, of an object fired directly upward is given by \(v = 120 - 32t\), where \(t\) is the number of seconds. When will the velocity be less than 32 feet per second? 
   
8. You have $40,000 to invest and want to earn at least $2,400 in interest. A bank will pay you 5% simple interest. Your brother needs money for his business and will pay you 9% interest. You want to reduce your risk by lending as little to your brother as possible. If you lend your brother \(x\) dollars, then you will have $40,000 \(- x\) to invest in the bank.
   
a. Write an inequality to describe the investments you need to make to earn at least $2,400 in interest. 
   
b. How little can you lend to your brother and still make your investment goal? 

**REPRESENTATIONS** Objective F

9. **Multiple Choice.** Which of the graphs below shows the solutions of \(-4 - 2n \geq 6\)?

   - A
   - B
   - C
   - D

10. Graph all solutions to the inequality in Question 4 above.