Name

3-8A **Lesson Master**

SKILLS Objective D

In question 1 give a. recursive and b. explicit formulas for the arithmetic sequence described.

1. first term –12, constant difference 2

   a. _____   b. _____

PROPERTIES Objective F

In 2 and 3, determine whether the numbers could be the terms of an arithmetic sequence.

2. 14, 12, 11, 10 _____   3. –9, –7.5, –6, –4.5 _____

In 4 and 5, determine whether the formula describes an arithmetic sequence.

4. $t_n = 8 - 2.4n$ _____

5. $\begin{cases} r_1 = 3 \\ r_n = 2r_{n-1}, n \geq 2 \end{cases}$ _____

6. If the fourth term of an arithmetic sequence is 9 and the seventh term is
   30, find the first term.   _____

USES Objective G

7. A family bought 42 boxes of macaroni and cheese when it was on sale.
   The kids eat three boxes per week. Write sequence formulas for the
   number of boxes left at the beginning of week n.

   a. Recursive: b. Explicit: _____

      _____

   c. Find the first four terms in the sequence.   _____

   d. Find the number of boxes left at the beginning of week 12.   _____

8. Airlines work on the assumption that passengers weigh an average of
   190 pounds. A regional jet weighs 25,900 pounds with only one person
   (the pilot) aboard. Write recursive and explicit sequences for the weight
   of the aircraft with n people aboard.

   a. Recursive: b. Explicit: _____

      _____

   c. Find the weight of the plane fully loaded with a crew of 3
      and 51 passengers.   _____