4-7

Practice

Form K

Arithmetic Sequences

Describe the pattern in each sequence. Then find the next two terms of the sequence.

1. 15, 11, 7, 3, −1, . . .

2. −2, 2, 6, 10, 14, . . .

3. 1.5, 3, 4.5, 6, . . .

4. 6.8, 5.4, 4, 2.6, . . .

5. 1, 10, 19, 28, . . .

61. −27, −22, −17, −12, . . .

Tell whether the sequence is arithmetic. If it is, identify the common difference.

7. 9, 15, 21, 27, . . .

8. −14, −10, −7, −3, . . .

9. −9, 6, 21, 36, . . .

10. 1, 5, 7, 9, . . .

11. 7, −5, −17, −29, . . .

12. 72, 48.5, 25, 1.5, . . .

13. You budget $100 for parking each month. Each day you use the downtown parking lot, it costs you $5. Write a rule to represent the amount of money left in your monthly budget as an arithmetic sequence. How much money is left in your budget after you have used the downtown parking lot 11 times this month?

14. You start an investment account with $3000 and save $100 each month. Write a rule to represent the total amount of money you invest into your account as an arithmetic sequence. How much money will you have invested after 12 months?

4-7 **Practice** (continued)   *Form K*
Arithmetic Sequences

Find the fourth, sixth, and thirteenth terms of the sequence described by each explicit formula.

15. $A(n) = 6 + (n-1)(-2)$

16. $A(n) = 12 + (n-1)(5)$

17. $A(n) = -2.2 + (n-1)(-1)$

18. $A(n) = 5 + (n-1)(0.5)$

19. $A(n) = -3 + (n-1)(6)$

20. $A(n) = -7.6 + (n-1)(3)$

Tell whether each sequence is arithmetic. Justify your answer. If the sequence is arithmetic, write a recursive and an explicit formula to represent it.

21. 22, 16, 10, 4, . . .

22. 6, 12, 24, 48, . . .

23. −18, −9, 0, 9, . . .

24. 1.5, 2.1, 2.7, 3.3, . . .

25. Open-Ended Write an explicit formula for the arithmetic sequence whose common difference is −18.

26. Reasoning The initial term of an arithmetic sequence is 5. The eleventh term is 125. What is the common difference of the arithmetic sequence?

27. Writing Explain how you can determine if a sequence is arithmetic.