

4-7 Practice

Form K

Describe the

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

1. 15, 12, 9, 6, 3, ...

2. -2, 2, 6, 10, 14, ...

3. -27, -22, -17, -12, ...

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

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

5. 9, 15, 21, 27, ...

6. -14, -10, -7, -3, ...

7. -9, 6, 21, 36, ...

8. 7, -5, -17, -29, ...

9. 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?

10. 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

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

11. $a_n = 6 + (n - 1)(-2)$

12. $a_n = 12 + (n - 1)(5)$

13. $a_n = -2.2 + (n - 1)(-1)$

14. $a_n = 5 + (n - 1)(2.5)$

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

15. 22, 16, 10, 4, ...

16. 6, 12, 24, 48, ...

17. -18, -9, 0, 9, ...

18. Error Analysis Your friend writes $a_8 = 3 + (8)(5)$ as an explicit formula for finding the eighth term of the arithmetic sequence 3, 8, 13, 18, ... Describe and correct your friend's error.

19. Write an explicit formula for the arithmetic sequence with first term 35 and recursive formula $a_n = a_{n-1} + (-14)$.

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