

7-8**Practice**
Geometric Sequences*Form K***Determine whether the sequence is a geometric sequence. Explain.**

1. 1, 4, 16, 64, ...

2. 108, 36, 12, 4, ...

3. 5, 15, 25, 40, ...

4. 75, 60, 48, 38.4, ...

Find the common ratio for each geometric sequence.

5. 2, 8, 32, 128, ...

6. 15, 150, 1500, 15,000, ...

7. -2, -2, -2, -2, ...

8. 243, 81, 27, 9, ...

Write the explicit formula for each geometric sequence.

9. 3, 6, 12, 24, ...

10. -1, -5, -25, -125, ...

11. 140, 70, 35, 17.5, ...

12. 12, -24, 48, -96, ...

Write the recursive formula for each geometric sequence.

13. 1, 7, 49, 343, ...

14. 5, 10, 20, 40, ...

15. 512, 384, 288, 216, ...

16. 8, -8, 8, -8, ...

7-8 Practice (continued)

Geometric Sequences

Form K

Determine if each sequence is a geometric sequence. If it is, find the common ratio and write the explicit and recursive formulas.

17. 4, 16, 25, 36, ...

18. 3, 12, 48, 192, ...

19. 7, 11, 15, 19, ...

20. -8, 16, -32, 64, ...

Identify each sequence as arithmetic, geometric, or neither.

21. 1, 6, 11, 16, ...

22. 125, 62.5, 31.25, 15.625 ...

23. 1, 5, 10, 16, ...

24. -5, 5, -5, 5, ...

25. **Biology** A certain population of finches is decreasing by 6% every year. The current number of finches in the population is 456. Write the explicit and recursive formulas for the geometric sequence formed by the decrease in the number of finches.

26. **Compare and Contrast** Explain how a geometric sequence and an arithmetic sequence are the same. How are they different?

27. A geometric sequence is represented by the function $f(x) = 3 \cdot 2^{x-1}$. What is the initial value of the sequence and the common ratio? Find the first 4 terms of the sequence.