Worksheet 8.6: Geometric Sequences

Find the common ratio of each sequence.

1. $2, 8, 32, 128, \ldots$

2. $-3, -12, -48, -192, \ldots$

3. $-80, 20, -5, 1.25, \ldots$

4. $0.45, 0.9, 1.8, 3.6$

Find the next three terms of each sequence.

5. $3, 6, 12, 24, \ldots$

6. $225, 45, 9, 1.8, \ldots$

Determine whether each sequence is *arithmetic* or *geometric*.

7. $2, 14, 98, 686, \ldots$

8. $12, 8, 4, 0, \ldots$

Find the first, fourth, and eighth terms of each sequence.

9. $A(n) = -5 \cdot 3^{n-1}$

10. $A(n) = 5 \cdot (-3)^{n-1}$

Write a rule and find the given term in each geometric sequence described below.

11. What is the tenth term when the first term is -6 and the common ratio is 2?

12. What is the seventh term when the first term is 1 and the common ratio is -4?

Find the next three terms of each sequence. Then write a rule for each sequence.

13. $216, 72, 24, 8, \ldots$

14. $0.1, 0.9, 8.1, 72.9, \ldots$