Name_____Period_____Date_____

Practice 8–6 Geometric Sequences

Find the next three terms of each sequence.

1. 4, 12, 36, 108, …

2. 2, –8, 32, –128, …

3. $18, 9, \frac{9}{2}, \frac{9}{4}, \ldots$

4. $1, -\frac{1}{3}, \frac{1}{9}, -\frac{1}{27}, \ldots$

Determine whether each sequence is arithmetic or geometric.

5. –8, –10, –12.5, –15.625, …

6. 5, 1, –3, –7, …

7. –10, –5, 0, 5, …

8. $6, -3, \frac{3}{2}, -\frac{3}{4}, \ldots$

Write a rule for each sequence.

9. 4, 12, 36, 108, …

10. 2, –8, 32, –128, …

11. $18, 9, \frac{9}{2}, \frac{9}{4}, \ldots$

12. 125, 25, 5, 1, …

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

13. $A(n) = 2 \cdot 3^{n-1}$

14. $A(n) = 3 \cdot 4^{n-1}$

15. $A(n) = 3 \cdot 2^{n-1}$

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

16. What is the sixth term when the first term is 4 and the common ratio is 3?

17. What is the fifth term when the first term is –2 and the common ratio is $-\frac{1}{2}$?

18. What is the tenth term when the first term is 3 and the common ratio is –1.2?