ADVANCED MATH Name_____

Geometric Sequences WS #1

Date_____ Period____

Find the term named in the problem and the explicit formula.

1) $-1,\ -2,\ -4,\ -8,\ ...$
Find a_{10}

2) $-4,\ 16,\ -64,\ 256,\ ...$
Find a_9

Given the explicit formula for a geometric sequence find the term named in the problem.

3) $a_n = -2 \cdot 2^{n-1}$
Find a_9

4) $a_n = -2 \cdot (-2)^{n-1}$
Find a_{12}

Find the term named in the problem.

5) $-3,\ 9,\ -27,\ 81,\ ...$
Find a_{11}

6) $-3,\ -6,\ -12,\ -24,\ ...$
Find a_9

Given the first term and the common ratio of a geometric sequence find the term named in the problem and the explicit formula.

7) $a_1 = -3,\ r = 2$
Find a_9

8) $a_1 = -1,\ r = 4$
Find a_{10}

Given the second term and the common ratio of a geometric sequence find the term named in the problem and the explicit formula.

9) $a_2 = -6,\ r = 3$
Find a_{12}

10) $a_2 = 8,\ r = -2$
Find a_{10}

Given a term in a geometric sequence and the common ratio find the term named in the problem and the explicit formula.

11) $a_6 = 3125,\ r = -5$
Find a_9

12) $a_1 = -4,\ r = -2$
Find a_{10}

13) $a_4 = -128,\ r = 4$
Find a_9

14) $a_3 = 18,\ r = 3$
Find a_{12}

Find the missing term or terms in each geometric sequence.

15) ..., 2, _____, _____, _____, _____, _____, 8192, ...

16) ..., $-\frac{3}{2}$, _____, _____, _____, _____, $-\frac{1}{162}$, ...