Honors Algebra I

Name_____

Homework

Determine if the sequence is geometric. If it is, find the common ratio.

1) 1, 6, 36, 216, ...

2) −1, −3, −9, −27, ...

Given the formula for a geometric sequence, find the first five terms and the 8th term.

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

4) $a_n = 2^{n-1}$

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

6) $a_n = 2 \cdot (-4)^{n-1}$

7) $a_n = 1.5 \cdot (-4)^{n-1}$

8) $a_n = -3 \cdot (-2)^{n-1}$

Convert bewteen the explicit and recursive formulas.

9) $a_n = 2^{n-1}$

10) $a_n = 3 \cdot 5^{n-1}$

11) $a_n = a_{n-1} \cdot -6$
$a_1 = 2$

12) $a_n = a_{n-1} \cdot 6$
$a_1 = 1$

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

14) $a_n = 3 \cdot 4^{n-1}$

15) $a_n = a_{n-1} \cdot 4$
$a_1 = 2$

16) $a_n = a_{n-1} \cdot -6$
$a_1 = -3$