

Geometric Sequences

Date _____ Period _____

Determine if the sequence is geometric. If it is, find the common ratio, the 8th term, and the explicit formula.

1) 4, 8, 16, 32, ...

2) 2, 8, 32, 128, ...

3) -3, -9, -27, -81, ...

4) -3, -6, -12, -24, ...

5) 3, 18, 108, 648, ...

Given a term in a geometric sequence and the common ratio find the 8th term and the explicit formula.

6) $a_6 = 32, r = 2$

7) $a_3 = -75, r = -5$

8) $a_5 = -3888, r = 6$

9) $a_1 = -4, r = -4$

10) $a_6 = -972, r = -3$

Given two terms in a geometric sequence find the common ratio, the 8th term, and the explicit formula.

11) $a_4 = 216$ and $a_3 = 36$

12) $a_3 = -100$ and $a_4 = 500$

13) $a_4 = -54$ and $a_5 = 162$

Find the common ratio, the 8th term, and the explicit formula.

14) 4, -12, 36, -108, ...

15) 4, 12, 36, 108, ...