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Geometric Sequences		Date:

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

1) - 3, - 15, - 75, - 375,	2) 1,- 5,25,- 125,
3) - 2, - 4, - 8, - 16,	4) 4, 16, 36, 64,
3) – 2,– 4,– 8,– 16,	4) 4, 16, 36, 64,

Given the first term and the common ratio of a geometric sequence find the first five terms and the explicit formula.

5) $a_1 = 1, r = 2$ 6) $a_1 = 0.8, r = -5$

Given the recursive formula for a geometric sequence find the common ratio, the first five terms, and the explicit formula.

7) $a_n = a_{n-1} - 3, a_1 = -3$	8) $a_n = a_{n-1} \cdot 3, a_1 = -3$
9) $a_n = a_{n-1} \cdot 5, a_1 = 2$	10) $a_n = a_{n-1} \cdot 2$, $a_1 = 2$



1) - 3, - 15, - 75, - 375,	2) 1,- 5,25,- 125,
r = 5	r = -5
3) -2,-4,-8,-16,	4) 4, 16, 36, 64,
r = 2	not geometric
5) $a_1 = 1, r = 2$	6) $a_1 = 0.8, r = -5$
First Five Terms: 1, 2, 4, 8, 16 Explicit: $a_n = 2^{n-1}$	First Five Terms: $0.8, -4, 20, -100, 500$ Explicit: $a_n = 0.8. (-5)^{n-1}$
7) $a_n = a_{n-1} - 3, a_1 = -3$	8) $a_n = a_{n-1} \cdot 3, a_1 = -3$
Common Ratio: $r = -3$ First Five Terms: 3.9 27.81 243	Common Ratio : $r = 3$ First Five Terms: 3 9 27 81 243
Explicit: $a_n = -3 \cdot (-3)^{n-1}$	Explicit: $a_n = -3.3^{n-1}$
9) $a_n = a_{n-1} \cdot 5, a_1 = 2$	10) $a_n = a_{n-1} \cdot 2, \ a_1 = 2$
Common Ratio: $r = 5$	Common Ratio:r = 2
First Five Terms: 2, 10, 50, 250, 1250 Explicit: $a_n = 2.5^{n-1}$	First Five Terms:2, 4, 8, 16. 32 Explicit: $a_n = 2.2^{n-1}$