Math 3 Honors

Unit 5 Day 11 Warm Up

Determine if the sequence is geometric. If it is, find the common ratio, the term named in the problem, and the explicit formula.

1) –2, 4, –8, 16, ...
Find a_{11}

2) 10, 8, 6, 4, ...
Find a_{11}

3) –2, –4, –8, –16, ...
Find a_9

4) 3, –6, 12, –24, ...
Find a_{10}

5) 4, –8, 16, –32, ...
Find a_9

6) –3, 9, –27, 81, ...
Find a_{11}

Find the missing term or terms in each geometric sequence.

7) ..., 1, ___, 25, ...

8) ..., 3, ___, 108, ...

9) ..., –4, ___, –16, ...

10) ..., 2, ___, 50, ...

Math 3 Honors

Unit 5 Day 11 Warm Up

Determine if the sequence is geometric. If it is, find the common ratio, the term named in the problem, and the explicit formula.

1) –2, 4, –8, 16, ...
Find a_{11}

Common Ratio: $r = -2$
$a_{11} = -2048$
Explicit: $a_n = -2 \cdot (-2)^{n-1}$

2) 10, 8, 6, 4, ...
Find a_{11}

Not geometric

3) –2, –4, –8, –16, ...
Find a_9

Common Ratio: $r = 2$
$a_9 = -512$
Explicit: $a_n = -2 \cdot 2^{n-1}$

4) 3, –6, 12, –24, ...
Find a_{10}

Common Ratio: $r = -2$
$a_{10} = -1536$
Explicit: $a_n = 3 \cdot (-2)^{n-1}$

5) 4, –8, 16, –32, ...
Find a_9

Common Ratio: $r = -2$
$a_9 = 1024$
Explicit: $a_n = 4 \cdot (-2)^{n-1}$

6) –3, 9, –27, 81, ...
Find a_{11}

Common Ratio: $r = -3$
$a_{11} = -177147$
Explicit: $a_n = -3 \cdot (-3)^{n-1}$

Find the missing term or terms in each geometric sequence.

7) ..., 1, ___, 25, ...

5

8) ..., 3, ___, 108, ...

18

9) ..., –4, ___, –16, ...

–8

10) ..., 2, ___, 50, ...

10