

Variable Expressions and Sequences - Matching Worksheet

Match the word problems to their answers. Write the letter of the answer that matches the problem.

- _____ 1. Find the first four terms of the sequence defined below, where n represents the position of a term in the sequence. Start with $n = 1$.
 $4(2)^n$
- _____ 2. The formula for the n^{th} term of a geometric sequence is
 $a_n = a_1r^{n-1}$
where a_n is the n^{th} term, a_1 is the first term, r is the common ratio, and n is the position of a term in the sequence 7, 35, 175, 875, 4375 Solve for a_1 , r , and express the full formula, including constants.
- _____ 3. The formula for the n^{th} term of a geometric sequence is
 $a_n = a_1r^{n-1}$
where a_n is the n^{th} term, a_1 is the first term, r is the common ratio, and n is the position of a term in the sequence 6, 24, 96, 384, 1536 Solve for a_1 , r , and express the full formula, including constants.
- _____ 4. Find the first three terms of the sequence defined below, where n represents the position of a term in the sequence. Start with $n = 4$.
 $2(2)^n$
- _____ 5. Find the first six terms of the sequence defined below, where n represents the position of a term in the sequence. Start with $n = 2$.
 $3(2)^n$
- a. 12, 24, 48, 96, 192, 384
- b. $a_n = 6(4)^{n-1}$
- c. $a_n = 7(5)^{n-1}$
- d. 8, 16, 32, 64
- e. 32, 64, 128

