MCR3U Name_____

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Unit 7 - Extra Practice

Note that the software used to produce these questions uses "a_n" where we use "t_n". Answers will be posted in Edsby.

Given the first term and the common difference of an arithmetic sequence find the 52nd term.

1) $a_1 = -6,\ d = -20$

2) $a_1 = 19,\ d = 7$

Determine if the sequence is arithmetic. If it is, find the common difference, the 52nd term, the explicit formula, and the recursive formula.

3) $-38,\ -41,\ -44,\ -47, \ldots$

4) $-22,\ -17,\ -12,\ -7, \ldots$

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Given two terms in an arithmetic sequence find the common difference and the 52nd term.

5) $a_{12} = -253$ and $a_{32} = -653$

6) $a_{13} = 2370$ and $a_{33} = 6370$

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

7) $-1,\ -6,\ -36,\ -216, \ldots$

8) $-1,\ -\frac{1}{3},\ -\frac{1}{9},\ -\frac{1}{27}, \ldots$

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

9) $a_5 = -32,\ r = -2$

10) $a_5 = -1024,\ r = -4$

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

11) $a_5 = -2500$ and $a_2 = 20$

12) $a_5 = 768$ and $a_2 = 12$

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Evaluate each arithmetic series described.

13) $a_1 = 4,\ a_n = 49,\ n = 10$

14) $a_1 = 21,\ d = 10,\ n = 9$

Determine the number of terms *n* in each arithmetic series.

15) $a_1 = 5,\ a_n = 125,\ S_n = 845$

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Evaluate each geometric series described.

16) $-4 - 16 - 64 - 256..., \ n = 9$

17) $a_1 = -4, \ a_n = -312500, \ r = 5$

18) $a_1 = 3, \ r = -2, \ n = 10$

19) $1 - 6 + 36 - 216..., \ n = 6$

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