Algebra 2 Name_____

MathDazed Tutoring - Sequences

Date_____

Given the explicit formula for an arithmetic sequence find the first five terms and the 52nd term.

1) $a_n = -6.7 - 0.2n$

2) $a_n = 10 - 7n$

3) $a_n = -19 - 10n$

4) $a_n = 18 + 9n$

5) $a_n = -15.4 + 0.6n$

Find the next three terms in each sequence.

6) $1,\ 1,\ \frac{3}{4},\ \frac{1}{2},\ \frac{5}{16}, \ldots$

7) $\frac{3}{2},\ \frac{5}{4},\ \frac{7}{8},\ \frac{9}{16},\ \frac{11}{32}, \ldots$

8) $11,\ 101,\ 1001,\ 10001,\ 100001, \ldots$

9) $-5,\ 1,\ -11,\ 13,\ -35, \ldots$

10) $-6,\ -2,\ 0,\ 1,\ \frac{3}{2}, \ldots$

Given the explicit formula for a geometric sequence find the first five terms and the 8th term.

11) $a_n = 4 \cdot 3^{n-1}$

12) $a_n = -2 \cdot \left(\frac{2}{5}\right)^{n-1}$

13) $a_n = -9 \cdot \left(-\frac{1}{3}\right)^{n-1}$

14) $a_n = -81 \cdot \left(\frac{1}{3}\right)^{n-1}$

15) $a_n = -\left(\frac{1}{2}\right)^{n-1}$

Find the missing term or terms in each arithmetic sequence.

16) ..., 12, ___, 2, ...

17) ..., –36, ___, –44, ...

18) ..., –15, ___, –21, ...

19) ..., –34, ___, –38, ...

20) ..., 38, ___, 32, ...