Algebra 2 Name_____

Arithmetic and Geometric Sequences

Date_____ Period____

Determine if the sequence is arithmetic or geometric, find the common difference or ratio, the 52nd term, and the explicit formula.

1) 37, 7, −23, −53, ...

2) $\frac{3}{2}, \frac{13}{6}, \frac{17}{6}, \frac{7}{2}, \ldots$

3) 21, −9, −39, −69, ...

4) −30, −21, −12, −3, ...

5) 6, 6.9, 7.8, 8.7, ...

6) 13.3, 14.8, 16.3, 17.8, ...

7) 16, 20, 24, 28, ...

8) −28, −18, −8, 2, ...

9) −6, −9, −12, −15, ...

10) 17, 20, 23, 26, ...

11) 6.2, 8, 9.8, 11.6, ...

12) 24, 224, 424, 624, ...

13) $-3,\ -9,\ -27,\ -81, \ldots$

14) $-1,\ -2,\ -4,\ -8, \ldots$

15) $0.6,\ 3,\ 15,\ 75, \ldots$

16) $-64,\ -32,\ -16,\ -8, \ldots$

17) $-3,\ \frac{3}{5},\ -\frac{3}{25},\ \frac{3}{125}, \ldots$

18) $5,\ \frac{5}{2},\ \frac{5}{4},\ \frac{5}{8}, \ldots$

19) $3,\ -6,\ 12,\ -24, \ldots$

20) $32,\ 8,\ 2,\ \frac{1}{2}, \ldots$

21) $1,\ \frac{1}{2},\ \frac{1}{4},\ \frac{1}{8}, \ldots$

22) $-4,\ 8,\ -16,\ 32, \ldots$

23) $-2,\ -1,\ -\frac{1}{2},\ -\frac{1}{4}, \ldots$

24) $-1,\ 5,\ -25,\ 125, \ldots$