Candle Center - Infinite Algebra 2 Name_____

Comparing Arithmetic and Geometric Sequences

Date_____ Period____

For each sequence, state if it is arithmetic, geometric, or neither.

1) 1, 3, 6, 10, 15, ...

2) 40, 43, 46, 49, 52, ...

3) 4, $\frac{13}{3}$, $\frac{14}{3}$, 5, $\frac{16}{3}$, ...

4) −4, 12, −36, 108, −324, ...

5) 4, 16, 36, 64, 100, ...

6) −29, −34, −39, −44, −49, ...

7) 1, 5, 25, 125, 625, ...

8) 1, 4, 9, 16, 25, ...

9) −34, −26, −18, −10, −2, ...

10) 0, 3, 8, 15, 24, ...

11) $a_n = -163 + 200n$

12) $a_n = 16 + 3n$

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

14) $a_n = -\frac{3}{4} + \frac{3}{2}n$

15) $a_n = -43 + 4n$

16) $a_n = (2n)^2$

17) $a_n = -43 + 7n$

18) $a_n = \dfrac{n}{2^n}$

19) $a_n = -(-3)^{n-1}$

20) $a_n = 2 \cdot (-3)^{n-1}$

21) $a_n = a_{n-1} + 6$
$a_1 = -17$

22) $a_n = na_{n-1}$
$a_1 = -1$

23) $a_n = a_{n-1} \cdot -5$
$a_1 = 4$

24) $a_n = a_{n-1} + 8$
$a_1 = -17$

25) $a_n = \dfrac{2 + a_{n-1}}{2}$
$a_1 = -6$

26) $a_n = a_{n-1} + 2$
$a_1 = 9$

27) $a_n = a_{n-1} + 10$
$a_1 = -1$

28) $a_n = na_{n-1}$
$a_1 = 1$

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Neither

2) 40, 43, 46, 49, 52, ...

Arithmetic

3) $4, \frac{13}{3}, \frac{14}{3}, 5, \frac{16}{3}, \ldots$

Arithmetic

4) −4, 12, −36, 108, −324, ...

Geometric

5) 4, 16, 36, 64, 100, ...

Neither

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