Kuta Software - Infinite Algebra 2 Name___________________

Introduction to Sequences

Date________________ Period____

Find the next three terms in each sequence.

1) 1, −3, 9, −27, 81, ...

2) 0, 100, 200, 300, 400, ...

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

4) $\frac{1}{2}, \frac{1}{3}, \frac{1}{6}, \frac{1}{9}, \frac{1}{12}, ...$

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

6) 16, 36, 56, 76, 96, ...

7) $1, \frac{2}{3}, \frac{4}{9}, \frac{8}{27}, \frac{16}{81}, ...$

8) −8, 100, −1000, 10000, −100000, ...

Find the tenth term in each sequence.

9) $-1, \frac{3}{2}, \frac{7}{2}, 6, \frac{17}{2}, ...$

10) 7, 9, 12, 16, 21, ...

11) −2, −6, −18, −54, −162, ...

12) −23, −18, −13, −8, −3, ...

13) −4, 12, −36, 108, −324, ...

14) $-6, -2, 0, 1, \frac{3}{2}, ...$

15) −28, 172, 372, 572, 772, ...

16) 37, 46, 55, 64, 73, ...

Find the first four terms in each sequence.

17) $a_n = \frac{2n+1}{n^2}$

18) $a_n = 3^{n-1}$

19) $a_n = n^2 + 3$

20) $a_n = \frac{n^2}{2n+1}$