Name___________________________________

Introduction to Sequences

Date________________ Period____

Find the next three terms in each sequence.

1) $1, -3, 9, -27, 81, \ldots$

2) $0, 100, 200, 300, 400, \ldots$

3) $0, 3, 8, 15, 24, \ldots$

4) $\frac{1}{2}, \frac{1}{2}, \frac{3}{8}, \frac{1}{4}, \frac{5}{32}, \ldots$

5) $4, 16, 36, 64, 100, \ldots$

6) $16, 36, 56, 76, 96, \ldots$

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

8) $-10, 100, -1000, 10000, -100000, \ldots$

Find the tenth term in each sequence.

9) -1, [illegible]$, \ldots$

10) $7, 9, 12, 16, 21, \ldots$

11) $-2, -6, -18, -54, -162, \ldots$

12) $-23, -18, -13, -8, -3, \ldots$

13) $-4, 12, -36, 108, -324, \ldots$

14) $-6, -3$, [illegible]$, \ldots$

15) $-28, 172, 372, 572, 772, \ldots$

16) $37, 46, 55, 64, 73, \ldots$

Find the first four terms in each sequence.

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

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

19) $a_n = n^2 + 1$

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