

F & T

Name \_\_\_\_\_

Explicit vs. Recursive HW

**Write an Explicit formula and Recursive formula for the following sequences.**

1.) 5, 8, 11, 14, .....

2.)  $\frac{1}{2}$ , 2, 8, 32,.....

3.) 7.2, 3.2, -0.8, -4.8 .....

4.) 33, 11,  $\frac{11}{3}$ ,  $\frac{11}{9}$  .....

5.) Given the explicit formula  $a_n = -3n + 7$  write an equivalent **recursive** formula.

6.) Given the explicit formula  $a_n = 2(1.5)^{n-1}$  write an equivalent **recursive** formula.

7.) The population of Jamesburg for the years 2010 – 2013, respectively, was reported as follows:

250,000      250,937      251,878      252,822

How can this sequence be recursively modeled?

(a)  $j_n = 250,000(1.00375)^{n-1}$

(b)  $j_n = 250,000 + (937)^{n-1}$

(c)  $j_1 = 250,000$   
 $j_n = 1.00375j_{n-1}$

(d)  $j_1 = 250,000$   
 $j_n = j_{n-1} + 937$