**Recurrence 5**

**Can someone please help with my practice questions? I would like details and explanations using words to show how you got the answer. I have accelerated courses and am lacking some foundation, so it would be really helpful for me to understand how you got the answers.**

1. Write the next four terms of the sequence:  for a0 = 1.
2. Find a recurrence relation with initial condition(s) satisfied by the sequence. Assume  is the first term of the sequence 
3. An employee joined a company in 1999 with a starting salary of $50,000. Every year, the employee receives a raise of $1,000 plus 5% of the previous year's salary. What will be his/her salary in 2007?
4. If you deposit $10,000 in an account that yields 6% interest compounded yearly, what will be the balance at the end of 5 years?
5. What are the minimum number of moves it takes to solve the Tower of Hanoi puzzle with 5 disks?
6. True or False? Homogeneous linear recurrence equations are linear combinations of power functions.
7. True or False?  is a linear homogeneous linear recurrence relation.
8. Find a solution to the recurrence relation 
9. True or False? The characteristic roots of a linear homogeneous recurrence relation with constant coefficients may be complex numbers.
10. Find the degree of the linear homogeneous linear recurrence relation: 