Sections 11.2
Applications of Geometric Series to Business and Economics

1. Twenty annual payments of $5000 each, with the first payment due one year from now, are to be made from an account earning 4% interest per year, compounded monthly. How much must be deposited now to cover the payments?

2. An employee accepts a job with a starting salary of $35000 and a cost-of-living increase of 4% per year for the next 10 years. What is the employee's salary at the start of the 11th year and what are her total earnings during the first 10 years?

3. A father offers to pay his children 1 penny the first day they do their errands, and to double their wages on each additional day. If you were home for the summer and this were your father, and the offer were valid for one month, what would you do? Why?

4. The Robinson family wishes to create a scholarship fund at a college. If a scholarship in the amount of \$5000 is to be awarded on an annual basis beginning next year, find the amount of the endowment they are required to make now. Assume that this fund will earn interest at a rate of 10% per year compounded continuously.