1. The CREF Stock fund, which is a retirement plan, has an average annual total return of $10.56 \%$ since its inception in August 1952. Assume that this rate continues to hold.
(a) Suppose that you have $\$ 1500$ to open your account and plan to contribute $\$ 200$ per month. Set up the DE for this situation and give the solution.
(b) What will the value of the account be 15 years? 25? 40?
2. To celebrate the end of the academic year, you throw a big bash for all your friends (and professors). Unfortunately, you put the entire $\$ 4000$ cost on your credit card that charges $14.8 \%$ annual interest.
(a) What is interest charge for the first month?
(b) Suppose you make monthly payments of $\$ 100$ toward paying off the balance. Set up the DE for this case and give the solution. How long will it take you to pay off the balance?
(c) If you want to pay off the balance in two years, what should your monthly payments be?
