

Economics 100b, Fall 2005
Sample Midterm Questions
Chapter 3

1) Congratulations! You have just discovered that while you were in high school, a philanthropist in your home town made a one-time deposit in an interest-bearing account to pay for your college education. If the current balance in the account is \$10,000 and the interest rate has been constant at 5% since the account was opened five years ago, how much was in the account when it was opened?

Now suppose you decide to leave the money in the account and use it to pay off student loans after you graduate. How much money will be in the account two years from now?

Suppose, after paying off your loans, you score a lucrative job and decide to give back to the cycle by making a one-time deposit in an interest-bearing account as a college fund for a newborn baby in your home town. If you start the college fund with \$10,000 and the interest rate has risen to 6%, how much will be in the college fund eighteen years from now when it's time for the college fund beneficiary to go to college, assuming the interest rate stays at 6%?

2) Suppose that the number of seniors who graduate with economics majors grows at 3% each year, the number of students who graduate with economics minors grows at 4% each year, and that in 2005 there were 3,000 seniors graduating with econ majors and 4,000 seniors graduating with econ minors. Calculate the number of students going on to graduate school in economics for the following cases:

- a) For the class of 2008, all economics majors will go to graduate school in economics
- b) For the class of 2010, all economics minors will go to graduate school in economics
- c) For the class of 2007, $\frac{3}{4}$ of economics majors and $\frac{1}{4}$ of economics minors will go to graduate school in economics.

Please round your answers up or down to the nearest student.