

Math 0290 *Differential Equations* - RUBIN - January 21, 2009

Investment Strategies: Person "A" opens an IRA at age 25, contributes \$2000/year for 10 years, and then stops. Person "B" waits until age 35 to open an IRA and then invests \$2000/year for 30 years. Assume that investments are made continuously.

- a) Assuming an annual interest rate of 8%, compounded continuously, what is the balance in each account when its owner reaches age 65?
- b) Determine the balance in each account at age 65 as a function of the interest rate r .
- c) Determine the interest rate r^* yielding the same balances in the two accounts at age 65.