

City Semester  
Present Value

Name:\_\_\_\_\_

*Show all work for full credit.*

1. You buy a 15 year bond for \$10,000, and it pays a coupon of 5% annually.
  - (a) Find the present value of the future cash flows of the bond assuming a discount rate of 4.5%.
  - (b) What if the discount rate is 4.4%?
  - (c) What if the discount rate is 4.6%?
  - (d) How can you describe how sensitive the present value of the cash flow is to interest rates?
2. If you receive 10 payments of \$10,000 at the end of each year for the next decade, what is the present value of this cash flow assuming a discount rate of 3%?
3. If you receive 10 payments of \$10,000 at the end of each year, but the payments only start 5 years from now, find the present value of this cash flow assuming a discount of 3%.
4. If you receive \$1000 every year forever, what is the present value of this stream of income assuming a discount of 3%?