NAME:

1. (10 pts) A $1000 bond with coupons at 7%, maturing in 8 years is sold to Marla who requires 8% on her investment. Marla holds the bond for 2 years and sells it to Marylynn who requires 7%(2) on her investment. How much did each pay.

2. (5 pts) A $2000 debenture paying 6% and maturing at par in 4 years has the quoted price of $1900. Find the yield to maturity using the bond salesman’s formula.
3. (15 pts) Write down the formulas for the annual depreciation allowances corresponding to an asset bought at a price \( C \) and that has a salvage value of \( S \) at the end of \( n \) years with the following methods:

a. straight line

b. sum of the years digits

c. double declining balance

d. declining balance. Explain how to obtain \( d \).

4. (5 pts) A $5000 investment realizes returns of $1200 in 1 year, $3000 in 2 years, $3300 in 3 years. Set up the equation to find the internal rate of return.

5. (10 pts) What would an investor desiring a yield of 12% pay for a share of common stock with expected dividends over the next 3 years of $3.00, $3.20 $3.45, if she expects to sell the stock at $54 at the end of 3 years?
Math 301–Eco 351
EXAM 4 – Dec 8, 2005 –TAKE HOME Due Dec 8, 11 pm

NAME:

6. (10 pts) Use the sinking fund method of depreciation, find the annual depreciation and book value at the end of the 4th year for an asset bought at 20,000 that has a salvage value of 11,000 at the end of 6 years, at a yield rate of 6%.

7. (15 pts) On May 1, 1990, a bond with par value $1,000 and annual coupons at 5.4% was purchased to yield an effective annual interest rate of 5%. On May 1, 2005, the bond is redeemable for $1,100. Calculate the amount of write–up or write–down in the year ending May 1, 1996.

8. (20 pts) A machine is purchased for $108,000 and is expected to last for 8 years. The book value at the end of the 2nd year is $44,091 by the declining balance method. Find the book value at the end of the 4th year using the sum of the digits method.
   Hint: don’t loose time finding $d$. Instead, find $(1 - d)^2$ and then use that to find $S$.

9. (10 pts) A 1000 par value 5–year bond with semianual coupons of 50 is purchased to yield 8% convertible semiannually. Two years and three months after purchase the bond is sold. Calculate the purchase price and the quoted price.