

MA 162 Recitation Worksheet Thursday 20th November 2014

1. Find the accumulated amount A if the principle P is invested at the interest rate of $r/year$ for t years.
 - a. $P = \$1000, r = 4\%, t = 8$, compounded annually
 - b. $P = \$2500, r = 4\%, t = 10$, compounded semiannually
 - c. $P = \$150,000, r = 4\%, t = 4$, compounded monthly
2. Maya paid \$10,000 for a 7-year bond issued by a city. She received interest amounting to \$3500 over the life of the bonds. What rate of (simple) interest did the bond pay?
3. The value of Alan's stock portfolio grew by 20% in the first year, followed by a growth of 10% in the second year. It dropped 10% and 20 in the third and fourth years respectively. Is the value of Alan's stock portfolio after 4 years the same as that when he started out? Explain.
4. If the cost of a semiprivate room in a hospital was \$680/day 5 years ago and hospital costs have risen at the rate of 8%/year since that time, what rate would you expect to pay for a semiprivate room today?
5. Juan is contemplating buying a zero coupon bond that matures in 10 years and face value value of \$10,000. If the bond yields a return of 5.25%/year, how much should Juan pay for the bond?