1. (20 pts.) Find the total amount due on a loan of $500 at 12% simple interest at the end of 30 months.
2. (20 pts.) If $1000 is invested at 6% compounded
(A) annually (B) semiannually (C) quarterly (D) monthly
what is the amount after 8 years? Write answers to the nearest cent.
3. (20 pts.) What is the effective rate of money invested at 6% compounded quarterly?
4. (20 pts.) What is the value of an annuity at the end of 10 years if $1000 is deposited every 6 months into an account earning 8% compounded semiannually? How much of this value is interest?
5. (15 pts.) If you sell your car to someone for $2,400 and agree to finance it at 1% per month on the unpaid balance, how much should you receive each month to amortize the loan in 24 months? How much interest will you receive?
6.(15 pts.) Let \( f(x) = 3x^4 - 6x^2 - 7 \).

(A) Find \( f'(x) \).

(B) Find the equation of the tangent line at \( x = 1 \).

(C) Find the values of \( x \) where the tangent line is horizontal.