Review for Exam I

Finite Math

1 March 2017

Quiz

What does it mean to amortize a loan?

Example

If you invest $5,650 *in an account paying* 8.65% *compounded continuously, how much money will be in the account at the end of* 10 *years?*

Example

A company establishes a sinking fund for plant retooling in 6 *years at an estimated cost of* $850,000. *How much should be invested semiannually into an account paying* 8.76% *compounded semiannually?*

Example

If an investor wants to earn an annual interest rate of 6.4% on a 26-week T-bill with a maturity value of $\$5,000$, how much should the investor pay for the T-bill

Example

Which is the better investment and why: 9% *compounded quarterly or* 9.25% *compounded annually?*

Example

How long will it take $4,000$ *to grow to* $10,000$ *if it is invested at* 6% *compounded monthly?* 9% *compounded monthly?*

Example

A couple has a $50,000$, *10-year mortgage at* 9% *compounded monthly. What will their monthly payment be?*

Example

A person wants to establish an annuity for retirement purposes. He wants to make quarterly deposits for 20 years so that he can then make quarterly withdrawals of $5,000 for 10 years. The annuity earns 7.32% interest compounded quarterly.

(a) *How much will have to be in the account at the time he retires?*

(b) *How much should be deposited each quarter for 20 years in order to accumulate the required amount?*

(c) *What is the total amount of interest earned during the 30-year period?*

Example

A couple wishes to have $40,000 *in* 6 *years for the down payment on a house. If the couple has* $25,000 *to invest, what interest rate (a) compounded quarterly, (b) compounded monthly, (c) compounded continuously should the couple look for?*