

THINGS TO KNOW FOR EXAM #2

Chapter 4: Exponential and Logarithmic Functions

- Definition and Properties of b^x .
- Know how to calculate interest when interest is compounded n times a year.
- Know how to calculate interest when interest is compounded continuously.
- Know how to calculate present value of money received in the future.
- Definition and Properties of $\log_b(x)$.
- Know how to take derivatives of b^x .
- Know how to take derivatives of $\log_b(x)$.
- Know how to do exponential growth and decay problems.
- Know how to compute optimal holding times.
- Know how to do problems involving the logistic model.

Chapter 5: Integration

- Indefinite Integrals (remember constant of integration).
- Know how to find position given acceleration and initial conditions.
- Integration by Substitution
- Know definition of Area, Riemann Sums and Definite Integrals.
- Properties of Definite Integrals.
- Fundamental Theorem of Calculus.
- Know how to find area between two curves.
- Lorentz Curves and the Gini Index.

- Definition of average value of a function on an interval.
- Future and Present Values of an Income Stream.
- Customers' and Producers' Surplus.

ADVICE

- Review examples done in class.
- Review homework problems and feel free to visit me during office hours.
- I will supply formulas for volumes, surface areas, etc. if needed.