MATH 150

Today

1. WeBWorK
2. 7.4 Indefinite integrals

Goals:

1. Indefinite integrals (Understand the definition of indefinite integrals)
2. Properties of indefinite integrals (Understand algebraic properties of indefinite integrals, the idea of a **family** of antiderivatives, and indefinite integrals of basic functions)

Where is today's material used?

1. Physics (distance traveled, mass of an object, volume of an object, total charge, ...)
2. Economics (interest, marginal revenue/cost/profit to change in revenue/cost/profit, the multiplier effect)
3. Chemistry (physical chemistry)

Indefinite Integrals

1. **Theorem**: Functions with the same derivative differ by a constant
2. Definition of indefinite integral/connection to antiderivatives
3. Algebraic properties
4. Antidifferentiation formulas
5. Examples. p. 499: 21, 24, 26, 27, 31, 34, 33, 37, 39, 42, 44, 51, 55,45, 48

Next Time

1. 7.5: The Fundamental Theorem of Calculus [22 min]
2. Homefun 20