



Instruction Manual Note Taking Method: Blank Handout + Example

Undergraduate Tutoring Center | University of Vermont

Review the other side of this handout for directions, and an example.

<u>Date:</u>	<u>What are the main concepts in this lecture?</u>	
<u>Class:</u>	1) 2) 3)	
Problem Example:		Steps of the problem:
If I get stuck on this type of problem, review or check:		Questions to ask:

Review the other side of this handout for a blank chart you can use for your notes.



Instruction Manual Note Taking Method: Blank Handout + Example

Undergraduate Tutoring Center | University of Vermont

Directions: Use the instruction manual method for note-taking when you want to organize equations and step by step solutions. List the problems / equations in the left-hand column; list the key steps for solving the equation in the right-hand column

Example:

Date: Oct. 13 Topic(s): U-substitution Class: Calc.	What are the main concepts in this lecture? 1) Basic U-sub 2) Recognizing Patterns 3) Chain rule
Problem Example:	Steps of the problem:
$\int (3x^2 + 2x)e^{(x^3+x^2)}dx$ Recognize: Exponent of e is coefficient $u = x^3 + x^2$ $dx * \frac{du}{dx} = 3x^2 + 2x * dx$ └ $\rightarrow du = (3x^2 + 2x)dx$ $\int (3x^2 + 2x)dx e^{(x^3+x^2)}$ $\int e^u du = e^u + c$ $= e^{x^3+x^2} + c$	How are the exponents & coefficients related? Make a u variable that includes as much as possible Pretend du/dx is a fraction, multiply both sides by dx ... Do this so you can <u>rewrite</u> the original problem easier. Substitute U in the original formula Take in derivative as usual Substitute the original value back in derived answer
If I get stuck on this type of problem, review or check:	Questions to ask:
- Unwind chain rule - What patters do I recognize? - Could I make it simpler?	- What do I do if u does not exactly equal du? - Could you do this with multiple variables?