Section 5.3 Worksheet:

Assigned problems: Exercises pp. 276-277, #3 and 4 (what do you notice? should you be surprised?); 11, 22, 24, 28, 38, 45, 47, 51 (due Wednesday, 10/31)

1. State the Fundamental Theorem of Calculus (FTC, Part I). Can you also explain it in your own words?

2. Who first clearly stated the FTC?

3. Suppose you use one antiderivative for f and I use a completely different one: will we get the same result for the integral?

4. Like the "dummy" index in sigma notation, there is a dummy variable in integrals. Where do we find it, and how can we interpret it?

Notes:

- From the name, you know that you're on to something important! This ties differentiation in with integration - brings the two together.

- Notice the notation of p. 273.