University of Lethbridge
Department of Mathematics and Computer Science
MATH 2565 - Tutorial #1
Thursday, January 11

First Name:_____

Last Name:_____

Print your name clearly in the space above.

Complete the problems on the back of this page to the best of your ability. If there is a problem you especially desire feedback on, please indicate this.

It is recommended that you work out the details on scrap paper before writing your solutions on the worksheet.

Additional practice (don't include your solutions here):

1. $\int \frac{e^{\sqrt{x}}}{\sqrt{x}}\,dx$
2. $\int x\sqrt{x-2}\,dx$. (Try this once using substitution, and again using integration by parts.)
3. $\int e^{\ln x}\,dx$. (With a bit of work you can do this by substituting $u = \ln x$ and noting that $x = e^u$. Why is this a bad idea?)

Evaluate the following integrals.

1. $\int_0^1 2x(1-x^2)^4\,dx$

2. $\int \tan^2(x)\,dx$

3. $\int x^3 e^x\,dx$

4. $\int e^{2x}\sin(3x)\,dx$

5. $\int \sec^5(x)\,dx$