Homework Assignment for Week 17

Assigned June 08, 2011.

1. Evaluate the following integrals. These problems may difficult for beginners. It is not expected that you can solve them all. Instead, in trying to solve these problems, you should benefit from your attempts of applying all the integration techniques you learned before.

   (a) $\displaystyle\int \frac{1}{e^{2x} - e^{-x}}\,dx$

   (b) $\displaystyle\int \frac{1}{\sin^2 x \cos^2 x}\,dx$

   (c) $\displaystyle\int x^x (1 + \ln x)\,dx$

   (d) $\displaystyle\int \frac{x \sin x}{\cos^2 x}\,dx$

   (e) $\displaystyle\int_0^\pi \sqrt{1 + \sin x}\,dx$

2. Section 8.6: Problems: 7, 13, 21, 25, 31, 33, 37, 38, 41, 51, 54, 55, 56, 58, 60, 71, 73.