Math 1210 **Name:** _____

Worksheet 14 **August 5, 2020**

Ex 1. Evaluate the following definite integrals:

a) $\displaystyle\int_0^2 x(x^2-1)\,dx$

b) $\displaystyle\int_0^3 2xe^{x^2}\,dx$

c) $\displaystyle\int_0^1 \frac{e^x}{e^x+1}\,dx$

d) $\displaystyle\int_1^e \frac{\ln(\sqrt{x})}{x}\,dx$ Hint: Use logarithm laws first.

Ex 2. Find the average value of the function $f(x) = \dfrac{2}{x+1}$ over the interval $[0, 4]$.

Ex 3. True/False: The definite integral $\displaystyle\int_{-1}^{1} \frac{1}{x}\,dx$ evaluates to 0. **True** **False**