B2. **MATH 1700: Test #2**

Name _____ Student number_____

1. (a) Use the definition of definite integral to write $\lim_{n\to\infty}\sum_{i=1}^{n}\frac{1}{n}\sin(\frac{i}{n}+1)$ as a definite integral. (Do not justify anything here; just write the answer!)

(b) Use part (a) and the Fundamental Theorem of Calculus to evaluate $\lim_{n\to\infty}\sum_{i=1}^{n}\frac{1}{n}\sin(\frac{i}{n}+1)$.

2. Evaluate the following integrals

(a) $\int\frac{(\ln x)^3}{x}dx$

OVER ->

(b) $\int_0^1 xe^{-x^2}\,dx$