

Homework 3

1. Problems on indefinite integrals: the first 9 (out of 11) homework questions of Section 5.3 on MyMathLab.
2. Problems on finding area of regions enclosed by curves: questions 6, 7, 8, 9 of the homework questions of Section 6.2 on MyMathLab.
3. Compute the following limits:

(a)

$$\lim_{n \rightarrow \infty} \sum_{k=0}^{n-1} \left(1 + \frac{k^3}{n^3}\right) \frac{1}{n}$$

(b)

$$\lim_{n \rightarrow \infty} \sum_{k=1}^n \frac{1}{n} \sin \left(\frac{2k\pi}{n} \right)$$