

MATH 170 – Additional exercises for Sections 5.1/5.2

Directions: Write each limit as an integral.

$$1) \lim_{n \rightarrow \infty} \sum_{i=1}^n \frac{\pi}{4n} \cos \frac{2\pi i}{n}$$

$$2) \lim_{n \rightarrow \infty} \sum_{i=1}^n \left(\frac{27i^2}{n^3} - \frac{18i}{n^2} + \frac{3}{n} \right)$$

$$3) \lim_{n \rightarrow \infty} \sum_{i=1}^n \left(-\frac{48i}{n^2} - \frac{4}{n} \right)$$