

Homework Assignment for Week 08

Assigned Nov 03, 2011.

1. Section 5.2: Problems 33, 35, 39, 45.

2. Evaluate

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

Hint: What is the area of a circle? what does it have to do with this problem?

3. Section 5.3: Problems 1, 31, 35, 36, 39, 40.

4. Section 5.4: Problems 7, 11, 13, 19, 23, 41, 43, 45, 51, 69, 73.

5. Section 5.5: Problems 11, 23, 36, 37, 45, 49, 55.

6. Evaluate

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