

Math102 - Quiz 1

October 13, 2010

1 Questions

1. Determine a region whose area is equal to

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

Do not evaluate the limit.

2. Evaluate

$$\int_0^2 (x^2 - 4) dx$$

using the definition of the definite integral.

3. Evaluate the integral

$$\int_2^4 \frac{dx}{4x}.$$

4. Find the general indefinite integral

$$\int \left(x\sqrt{x} + \frac{4}{x^2 + 1} \right) dx.$$