

King Fahd University of Petroleum & Minerals

Department of Mathematical Sciences

MATH - 102-08

Semester 122

Quiz - 1

Name: \_\_\_\_\_ ID# \_\_\_\_\_

**Problem 1.** Evaluate

$$\lim_{n \rightarrow \infty} \frac{1}{n^2} (2 + 4 + 6 + \dots + 2n)$$

**Problem2.**

Find  $f(4)$  if

$$\int_0^{x^2} f(t) dt = x \cos(\pi x).$$

**Problem3.** Evaluate

$$\int_0^4 \frac{2t}{t^2 - 25} dt.$$