## Quiz 6

**Honor Code**: On my honor, I have neither given nor received any aid during this examination.

**Instruction**: You are not allowed to use a calculator during this examination. You need to show all necessary steps to get credit. This document is **double-sided**.

## Problem 1

Evaluate the following integrals.

$$1. \int x \cdot \sin(x^2) \, dx$$

$$2. \int \frac{1}{\cos^2(x) \cdot \sqrt{1 + \tan(x)}} \, dx$$

3. 
$$\int_0^{\pi/3} \frac{\sin(x)}{1 - \sin^2(x)} \, dx$$