Student ID:

Student Name:

Serial Number:

MATH201, Section 2
Fall 2018, Term 181

Quiz 6
Version A

Instructions: Show Your Work!

1. (5 pts) Use Lagrange Multipliers to find the extreme values of

$$f(x, y, z) = x + y - z$$

on the unit sphere $x^2 + y^2 + z^2 = 1$.

2. (5 pts) Evaluate

$$\int_0^8 \int_{\sqrt[3]{y}}^2 \sin(x^4) dx dy.$$

Student ID:

Student Name:

Serial Number:

MATH201, Section 3
Fall 2018, Term 181

Quiz 6
Version B

Instructions: Show Your Work!

1. (5 pts) Use Lagrange Multipliers to find the extreme values of

$$f(x, y, z) = xy + xz$$

on the sphere $x^2 + y^2 + z^2 = 4$.

2. (5 pts) Evaluate

$$\iint_D \frac{x}{(1+y)^2} dA.$$

where

$$D = \left\{(x, y) : x \geq 0, y \geq 0, y = x, y = x^2\right\}$$