Name:

SM223 – Calculus III with Optimization
Assoc. Prof. Nelson Uhan

Fall 2017

# Quiz 8 – 16 November 2017

**Instructions.** You have 10 minutes to complete this quiz. You may use a calculator. You may not use any other materials (e.g., notes, homework, books). Show all your work.

| Problem | Weight | Score |
|---|---|---|
| 1 | 1 | |
| 2 | 1 | |
| Total | | / 20 |

**Problem 1.** Evaluate the following integral by reversing the order of integration: $\int_0^1 \int_{3y}^3 e^{x^2}\,dx\,dy$.

(over)

**Problem 2.** Evaluate the following integral by changing to polar coordinates: $\iint_D e^{-x^2-y^2}\, dA$, where $D$ is the region bounded by the semicircle $x = \sqrt{16 - y^2}$ and the $y$-axis.