Student ID:

Student Name:

Serial Number:

Math 102, Section 15
Spring 2016, Term 152

Quiz 3
Version A

Instructions: Show Your Work!

1. (4 pts) Use the method of cylindrical shells to find the volume generated by rotating the region bounded by the curves

$$x = y^2 + 1, \quad x = 2,$$

about $y = -2$.

2. (6 pts) Find

(a) $\int_1^4 \frac{\ln x}{\sqrt{x}} dx$,

(b) $\int \cot^5 x \csc^3 x t dt$,

Student ID:

Student Name:

Serial Number:

Math 102, Section 27
Spring 2016, Term 152

Quiz 3
Version B

Instructions: Show Your Work!

1. (4 pts) Use the method of cylindrical shells to find the volume generated by rotating the region bounded by the curves

$$y = x^3, \quad y = 0, \quad x = 1,$$

about $y = 1$.

2. (6 pts) Find

(a) $\int_1^9 \frac{\ln t}{\sqrt{t}} dt$,

(b) $\int \tan^5 t \sec^3 t dt$,