Student ID:

Student Name:

Serial Number:

Math 102, Section 15
Spring 2016, Term 152

Quiz 4
Version A

Instructions: Show Your Work!

1. (3 pts) Find the integral

$$\int \frac{\sqrt{1+x^2}}{x} dx$$

2. (3 pts) Write out the form of the partial fraction decomposition of the function

$$\frac{2}{x^2(x-1)(x^2-4)(x-3x+4)^2}$$

without finding the constants.

3. (4 pts) Determine whether the integral is convergent or divergent. Evaluate it if it is convergent.

$$\int_{-\infty}^{\infty} xe^{-x^2} dx$$

Student ID:

Student Name:

Serial Number:

Math 102, Section 27
Spring 2016, Term 152

Quiz 4
Version B

Instructions: Show Your Work!

1. (3 pts) Find the integral

$$\int x\sqrt{1-x^4}dx$$

2. (3 pts) Write out the form of the partial fraction decomposition of the function

$$\frac{2}{x^2(x-1)(x^2-4)(x-3x+4)^2}$$

without finding the constants.

3. (4 pts) Determine whether the integral is convergent or divergent. Evaluate it if it is convergent.

$$\int_1^\infty \frac{e^{-\sqrt{x}}}{\sqrt{x}}dx$$