Math 2300-007: Quiz 3

Name: _____   Score: _____

Collaborators:

Directions: This take-home quiz will be due at the beginning of class on Tuesday, February 6. You may use your notes, textbook, and colleagues from our class as resources, but your final write-up should be in your own words. If you work with collaborators from our class, please include their names on this quiz.

1. Integrate $\displaystyle\int \frac{4x}{(1-x^2)^2}$ using the following three techniques:

   (a) (1 point) u/du-substitution;

   (b) (2 points) trigonometric substitution;

1

(c) (2 points) partial fractions.

2. (3 points) Evaluate $\displaystyle\int \frac{-x^3 + 5x^2 - 2x + 7}{(x-1)(x^2+2)}\, dx.$

3. (2 points) Evaluate $\int_0^1 \dfrac{x^2}{(4-x^2)^{3/2}}\,dx$.