Math 253, Section 102, Fall 2006
Quiz 7, November 15

Name: **SID:**

Instructions

- The total time is 20 minutes.
- The total score is 25 points.
- Use the reverse side of each page if you need extra space.
- Show all your work. A correct answer without intermediate steps will receive no credit.
- Calculators and cheat sheets are not allowed.

Problem	Points	Score
1	7	
2	6	
3	12	
TOTAL	25	

1. Calculate the double integral

$$\iint_R \frac{x}{1+xy}\,dA, \qquad \text{where } R = [0,1] \times [0,1].$$

(7 points)

2. Rewrite the following integral after interchanging the order of integration.

$$\int_0^3 \int_0^{\sqrt{9-y}} f(x,y)\,dx\,dy.$$

(6 points)

3. Find the volume of the solid under the surface $z = 2x + y^2$ and above the region bounded by $x = y^2$ and $x = y^3$. Please provide a clear sketch of the domain on which you are integrating.

(13 points)