Calculus and Analytic Geometry III **Name:** _____

The majority of the credit you receive will be based on the completeness and the clarity of your responses. **Show all of your work and justify your solutions as much as possible.** This is a 15 minute quiz and has 2 questions, for a total of 10 points

(5 points) 1. Find equations for a transformation T that maps a region S in the uv-plane onto the xy-plane, where R is bounded by the lines $x - 2y = 0$, $x - 2y = 4$, $3x - y = 1$, and $3x - y = 8$.

(5 points) 2. Let R be the region defined in problem 1. Evaluate the following double integral.

$$\iint_R \frac{x - 2y}{3x - y}\, dA$$