MATH 261 Quiz 7 Name: .
Student number:

Show all work. 5 points each.

1. Find the critical point for $f(x, y) = x^2+xy+y^2+y$. Use the second derivative test to see if it is a local max, a local min, or a saddle point.

2. Calculate the double integral $\iint_R \frac{xy^2}{x^2+1}\, dA$ where $R = \{(x, y) \,|\, 0 \leq x \leq 1, -3 \leq y \leq 3\}$