MATH1100 – QUIZ 6 MAKE UP

NAME:

1. (10 points) From a tract of land a developer plans to fence a rectangular region and then divide it into two identical rectangular lots by putting a fence down the middle. Suppose that the fence for the outside boundary costs $5 per foot and the fence in the middle costs $2 per foot. If each lot contains 13500 square feet, find the dimensions of each lot that yield minimum cost for the fence.

2. (10 points) You are given the function $f(x)=\frac{3x^2+1}{x^2-9}$

State the domain of the function.
Sketch the function.
Label:

- intercepts
- relative extrema
- points of inflection
- asymptotes