QUIZ 6 - MATH 112 YOUR NAME:

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Study, using the first derivative, the graph of $f(x) = \frac{6x}{x^2 + 9}$ (find the domain, the asymptotes, first derivative sign table and sketch the graph).

2. Use the second-derivative test to determine the relative extrema (relative maxima and minima) of $f(x) = x + \frac{1}{x}$. Caution: First, find the domain!