

# Calculus 1

## Quiz 7

Name: \_\_\_\_\_

1. For the following functions, find critical points, inflection points, regions where the functions are increasing, decreasing, concave up, and concave down. Then sketch the graph

(a)  $f(x) = x^4 - 4x^3$

(b)  $f(x) = \frac{x+2}{x+3}$

(c)  $f(x) = 1 + \frac{1}{x} + \frac{1}{x^2}$

2. Sketch the graph of  $f(x) = e^{-x} \sin x$  for  $0 \leq x \leq \pi$ . Find critical points and inflection points.

3.