Math 4329: Worksheet 05
Dr. Natasha Sharma

Name: _____

1. Apply Newton's Method to $f(x) = -x^4 + 3x^2 + 2$ with starting guess $x_0 = 1$.

   Do we observe convergence ? What happens if we change the choice of x_0 to 0 ? What about $x_0 = 2$?

2. Apply the Secant Method to the choice of $f(x)$ above with your choice of initial two guesses x_0 and x_1. Do you observe convergence ?

3. Based on the experience of the above two methods, what would your choice of method be ? Please justify.