

ECE 3340 Numerical Methods

Homework 7: Precision Loss

Name:

ID:

Problem 1: Bisection Method

Calculate $\cos^2(x) = e^x$ using 5 iterations of the bisection method on the interval $[-3, -1]$.

	a	f(a)	b	f(b)	c	f(c)
1						
2						
3						
4						
5						

$$x =$$

Problem 2: Newton's Method

Calculate $\cos^2(x) = e^x$ using 5 iterations of Newton's method with $x_0 = -3$.

	x_n	$f(x_n)$	$f'(x_0)$	x_{n+1}
1				
2				
3				
4				
5				

$x =$