

Your name: \_\_\_\_\_

MTH 132-020

Calculus I

F18

**Quiz 9**

**Show all your work**

1. Starting with  $x_1 = 0$  use one iteration of Newton's method to approximate a solution of the equation  $x^4 - 2x + 1 = 0$ .

2. Let  $f$  be a differentiable function. Determine  $f$  if  $f'(x) = 3x^2 + \sin x$  and  $f(0) = -2$ .

3. Determine the approximation sum  $R_4$  for the area of the region under the curve  $y = x^4$  from  $x = 1$  to  $x = 3$ . **Do not evaluate the sum.**