

**Math101 Quiz2**

11<sup>th</sup> May 2011

Name \_\_\_\_\_

Student ID \_\_\_\_\_

Section \_\_\_\_\_

**Instructions.** Write neatly and legibly. You may lose points for messy work. Show all your work. No points for answers without justification.

1. Differentiate the function

$$f(x) = \cosh(\ln x)$$

defined for  $x > 0$ .

2. Find the absolute maximum and minimum of

$$f(x) = x^3 - 5x^2 - 8x + 3$$

on the interval  $[0, 5]$ ..

3. Apply the Mean Value Theorem to

$$f(x) = \frac{x+3}{x+4}$$

on  $[1, 3]$  to find a value  $c$  which satisfies the conclusion of this theorem.