University of Lethbridge
Department of Mathematics and Computer Science

MATH 1565 - Tutorial #8

Print your name and student number clearly in the space above.

Complete the problems on the back of this page to the best of your ability. If there is a problem you especially desire feedback on, please indicate this.

It is recommended that you work out the details on scrap paper before writing your solutions on this page.

[4] 1. Find the absolute maximum and minimum of $f(x) = 3x^{2/3} - 2x$ on $[-1, 2]$. (You may use a calculator.)

[2] 2. Use the Mean Value Theorem to show that for any $a, b \in \mathbb{R}$,

$$|\sin(b) - \sin(a)| \leq |b - a|.$$

[4] 3. Find and classify the critical points of $f(x) = e^x \sin(x)$ for $x \in [0, 2\pi]$