

Reading Quiz #5

姓名：_____ 系級：_____ 學號：_____ 分數：_____

Read Sections 4.1-4.2(pages 222-239) and do the following.

1. Find the absolute maximum and absolute minimum values of $f(x) = 2x^3 - 3x^2 - 12x + 1$ on the interval $[-2, 3]$.

2. Find the absolute maximum and absolute minimum values of $f(x) = x\sqrt{x - x^2}$.

3. Let $f(x) = \frac{x+1}{x-1}$. Show that there is no value of c such that $f(3) - f(0) = f'(c)(3 - 0)$. Why does this not contradict the Mean Value Theorem?

4. Show that the equation $1 + 2x + x^3 + 4x^5$ has exactly one real root.