Math 101 (Term 172) – Quiz 3

Student Name_____ **Student ID:** _____

Exercise 1 [3 points]

Find $\lim\limits_{x \to 0} \dfrac{\sin 3x \ \sin x^2}{x^2 \sin 5x} =$

Exercise 2 [3 points]

Let $f(x) = |x - 1| + |x + 2|$. Find $f'(-2)$.

Exercise 3 [4 points]

Let $g(x) = \sin x$ and $f(x) = x \sin x$.

(a) Find $g^{(34)}(x)$ and $g^{(35)}(x)$

(b) Find $f^{(35)}(x)$