

Student Name _____ Student ID: _____

Exercise 1

Find $\lim_{\theta \rightarrow 0} \sin 2\theta \cot 3\theta =$

Exercise 2

$$f(x) = \begin{cases} x^2 + a, & x \leq 0 \\ x - a \\ a - 1, & x > 0 \end{cases}$$

For what values of a is f continuous everywhere?