

Name: _____
Student ID: _____

Quiz 6

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. pg.117#20 (4 marks) Find $(f \circ g)(x)$, $(g \circ f)(x)$: $f(x) = x^2 - 3$, $g(x) = \frac{1}{x+2}$.

Question 2. pg.110#12 (6 marks) Sketch the graph of the piece-wise function:

$$f(x) = \begin{cases} -x - 1 & \text{if } x < -1 \\ -1 & \text{if } -1 \leq x \leq 1 \\ x^2 - 1 & \text{if } x > 1 \end{cases}$$