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.110#2 *(5 marks)* Graph the following piece-wise function:

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

Question 2. pg.117#18 *(2 marks)* Let $f(x) = \frac{1}{\sqrt{x-3}}$ and $g(x) = \frac{2}{x+1}$, then find $(g \circ f)(x)$ and $(f \circ g)(x)$. *Do not simplify*

Question 3. pg.125#5n *(5 marks)* If $f(x) = \sqrt[3]{\frac{5x+1}{2}} - 3$ then find $f^{-1}(x)$.