

## Quiz 2

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.** (3 marks) Simplify the complex fraction:

$$\frac{2x^{-1} + 4x^{-2}}{2x^{-2} + x^{-1}}$$

**Question 2.** (3 marks) Solve for x:

$$\frac{1}{x-4} - \frac{3}{x+4} - \frac{6}{5x} = 0$$

**Question 3.** (4 marks) Sketch the graph of the function. Find the domain and range of the function.

$$f(x) = \begin{cases} x & \text{for } x < 0 \\ 2x + 1 & \text{for } x \geq 0 \end{cases}$$