Hand your completed quiz in before the due date. Do not forget to write down your name and student ID number. Marks will be awarded for this quiz based on the clarity of your answers. The marker will pay close attention to the logic of your answers. Please show all your working.

Q.1 Write a code for a mapping that generates a list of the absolute values of the numbers in numbers = [-1, 2, -3, 4].

Q.2 Write a code for a filtering that generates a list of the positive numbers in numbers = [-1, 2, -3, 4].

Q.3 What does the expression list(map(math.sqrt, [9, 25, 36])) give? Answer without using Python.

Q.4 What does the expression reduce(max, [34, 21, 99, 67, 10]) give? Answer without using Python.

Q.5 Convert Newton’s method approximating square roots to a recursive function named newton.

Q.6 (optional) A list of numbers is sorted in ascending order if it is empty or each item except the last one is less than or equal to its successor. Define a function isSorted that expects a list as an argument and returns True if the list is sorted, or returns False otherwise. (Hint: For a list of length 2 or greater, loop through the list and compare pairs of items, from left to right, and return False if the first item in a pair is greater.)