Names (First only, no student numbers):

Before you begin you should have read and worked through Lab 1.

All questions should be done by hand (not by computer) and show your steps.

1. Given the following four(x, y) points (-5,-1), (0,0), (5,1), (8,4) find the y-value at $x = 3$ using

   (a) Linear Interpolation

   (b) Quadratic Interpolation

2. Given the equation

$$\frac{\partial y}{\partial t} = y(y + t) \tag{1}$$

   write down

   (a) forward Euler difference formula

   (b) backward Euler difference formula

   (c) centered difference formula