

Department of Mathematics and Statistics
University of Calgary

AMAT 311 L01
Fall 2006

Quiz 4b

Thursday, November 9, 13:00-13:50.
Time: 30 min.

Calculators are not allowed

Name:.....

I agree that this paper may be placed at the front of the classroom for pick-up

Signature:.....

Problem. Consider the differential equation

$$y'' + 2y' + 2y = 0.$$

- 1/. [4 marks] Find two real linearly independent solutions of this equation.
- 2/. [4 marks] Prove that the solutions obtained in 1/ are linearly independent by computing their Wronskian.
- 3/. [4 marks] Solve the initial value problem

$$y'' + 2y' + 2y = 0, \quad y(0) = 1, \quad y'(0) = -1.$$