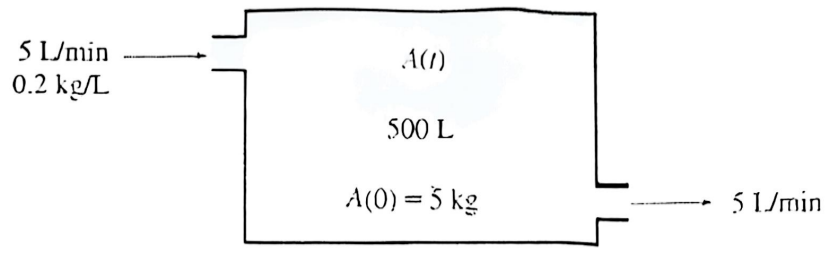
Math-1153 Class Test 04 Section BB

1. Formulate a first-order differential equation to find the rate of change of $A(t)$ for the following mixture of the solutions. [2]



2. Use the method of reduction of order to find a second solution of the differential equation $y'' - y = 0,\ t > 0$ with stated first solution $y_1(t) = e^t$. [4]

3. Solve $16y'' - 8y' + 145y = 0; y(0) = -2, y'(0) = 1$. [4]