

MT 3700 - Differential Equations

WS2

Separation of variables: Going back to section 1.1 problem number 8.

Suppose two students memorize lists according to the same model

$$\frac{dL}{dt} = 2(1 - L).$$

1. If one of the students knows one-half of the list at time $t = 0$ and the other knows none of the list. Use separation of variables to find:
 - a. A general solution to the differential equation.
 - b. A specific model representing each students learning process, call them $L_1(t)$ and $L_2(t)$.

