Activity 10 Due Wednesday, November 8 before class.

Given points (*a*,*s*) and (*b,t*) falling on a straight line, *y = mx + b*, we have the equation

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Write matlab code to solve the heat equation given in class using the shooting method. Use L = 2, w =4, u(0) = 0, u(L) = 10 and Tair = 5. Graph the solution and verify that it looks like the solution obtained in class.

You will need to write the equation as a system and implement ode45 three different times.

Submit your code and graph.