MTH 161, Quiz #7, Spring 2021 Name_____

Instructions: Show all work. Use exact answers unless specifically asked to round. Answer all parts of each question.

1. Solve each equation for x.
   a. $e^{4x} + 5e^{2x} - 24 = 0$

   b. $\log x + \log(x + 3) = \log 10$

2. Use Newton's Law of Cooling $T = C + (T_0 - c)e^{kt}$ to solve: a pizza removed from the oven has a temperature of $450°$F. It is left sitting in a room that has a temperature of $70°F$. After five minutes the pizza is $300°F$. Find a model for the temperature of the cooling pizza and use that to find the temperature of the pizza after 20 minutes.