Problem 3.1–6. Easy.

Problem 3.1–24.
   a. Just plug each of the two given functions into the linear system. Then check to see if the left-hand side is the same as the right-hand side.
   b. Since the given system is linear, you can look for a solution in the form

   \[ Y(t) = k_1 Y_1(t) + k_2 Y_2(t), \]

   where \( k_1 \) and \( k_2 \) are constants. Use the initial condition to determine the values of \( k_1 \) and \( k_2 \).