A) Lecture 3- "Some homogeneous equations are hard for homosapiens to handle."

1) An easy homogeneous equation to handle.
   example;
   \[(a\xi^2-b\psi^2) + c(\xi\psi)d\psi/d\xi = 0\]

2) Project 2 (due 11:59:59 Tuesday September 13)
   Start with the last step of the solution of the homogeneous equation above as
developed in class and find the solution as an expression in x. \(f(x) = ?\)

3) A more difficult homogeneous equation as a model.
   example;
   \[u + C_B \frac{du}{C_B} = \frac{(C_{mB} - \alpha_1 C_{mB})}{\alpha_1 C_B}\]

4) Project 3 (due 11:59:59 Tuesday December 6)
   Develop a model for the production of monochlorobenzene from the reaction of
   benzene with chlorine when dichlorobenzene and trichlorobenzene are also
   possible products. Include in your answer;
   (a) The full development of the analytical equations that comprise the model
       components.
   (b) Include a concentration plot of the fate of all reaction products with respect to
       benzene concentration.

A) Lecture 4- "Looking Back to Look Forward"