Math 2150 - Homework # 9

Variation of parameters

1. Find a general solution to the given ODE. Give an interval that the general solution is defined on.

   To do this first find the homogeneous solution y_h and then particular solution y_p. Use variation of parameters to find y_p.

   (a) $y'' + y = \sec(x)$

   (b) $y'' + y = \sin(x)$

   (c) $y'' - 9y = \dfrac{9x}{e^{3x}}$

   (d) $y'' + 3y' + 2y = \dfrac{1}{1+e^x}$

   (e) $y'' + 3y' + 2y = \sin(e^x)$