Math 205, Differential Equations

Quiz 5

1. Use reduction of order to find a second solution.

$$y'' - 4y = 0; \qquad y_1 = e^{-2x}$$

2. Determine whether the given set of functions is linearly independent. Do not use the Wronskian.

a. $f_1(x) = x, \quad f_2(x) = x - 1, \quad f_3(x) = x + 3$

a. $f_1(x) = 5, \quad f_2(x) = \cos^2 x, \quad f_3(x) = \sin^2 x$