

Name \_\_\_\_\_

Student I.D. \_\_\_\_\_

**Math 2250-4**  
**Quiz 11**  
**April 12, 2013**

1a) Use the methods we've been discussing to find the general solution to the system of differential equations

$$\begin{bmatrix} x'(t) \\ y'(t) \end{bmatrix} = \begin{bmatrix} 0 & 1 \\ -8 & -6 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}.$$

(8 points)

1b) For any solution  $[x(t), y(t)]^T$  to the first order system of DEs above, what is the second order differential equation satisfied by  $x(t)$  ?

(2 points)