

Name _____

Student I.D. _____

Math 2250-4

Quiz 11

April 13, 2012

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

$$\begin{bmatrix} x'(t) \\ y'(t) \end{bmatrix} = \begin{bmatrix} 0 & 1 \\ -6 & -5 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}.$$

(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)