

Math 240 Fall 2011  
Quiz 8  
TA: Matti Åstrand

Name: \_\_\_\_\_

Show all work clearly and in order, and box your final answers. You have 10 minutes to take this quiz.

- 1.** (7 points) Find the general solution to the differential equation

$$X' = \begin{pmatrix} 1 & -2 \\ 2 & 1 \end{pmatrix} X$$

- 2.** (8 points) Find a power series solution to the differential equation  $y' = xy$  with  $y(0) = 1$  and write the terms up to the  $x^4$ -term.