

QUIZ #26, 11/27/07

MATH 54, FALL 2007

Show your work and justify your answers! Feel free to use both sides.

Name:

1. (5pts) (a) Find $\exp\left(\begin{bmatrix} 1 & 0 \\ 1 & 1 \end{bmatrix}\right)$.

(b) Find the general solution to $\mathbf{x}' = \begin{bmatrix} 1 & 0 \\ 1 & 1 \end{bmatrix} \mathbf{x}$.

2. (5pts) (a) Find $\exp\left(\begin{bmatrix} 0 & 1 \\ -4 & -4 \end{bmatrix}\right)$.

(b) Find the general solution to $\mathbf{x}' = \begin{bmatrix} 0 & 1 \\ -4 & -4 \end{bmatrix} \mathbf{x}$.