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Final Exam

Linear Algebra, Dave Bayer, December 21, 2006

Name: _____

[1] (5 pts)	[2] (5 pts)	[3] (5 pts)	[4] (5 pts)	[5] (5 pts)	TOTAL

Please work only one problem per page, starting with the pages provided, and identify all continuations clearly.

[1] Let $A = \begin{bmatrix} 2 & 1 \\ 4 & 5 \end{bmatrix}$. Write A as CDC^{-1} for a diagonal matrix D . Find the matrix e^{At} .

answer:

work:

[2] Let $A = \begin{bmatrix} -3 & -2 \\ 6 & 4 \end{bmatrix}$. Write A as CDC^{-1} for a diagonal matrix D . Find the matrix e^{At} .

answer:

work:

[3] Let $A = \begin{bmatrix} 1 & 2 & 2 \\ 1 & 1 & -1 \\ 2 & 2 & 1 \end{bmatrix}$. Write A as CDC^{-1} for a diagonal matrix D . Find the matrix e^{At} .

answer:

work:

[4] Let $A = \begin{bmatrix} 8 & -1 \\ 1 & 6 \end{bmatrix}$. Find the matrix e^{At} .

answer:

work:

[5] Let $A = \begin{bmatrix} 1 & 1 \\ -1 & 1 \end{bmatrix}$. Find the matrix e^{At} .

answer:

work:

Problem: _____

Problem: _____

Problem: _____