Additional Practice Problems

Linear Algebra, Dave Bayer, May, 2004

Name: _____

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

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

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answer:

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work:

[2] Let $A = \begin{bmatrix} -5 & 3 & 4 \\ -2 & 2 & 2 \\ -6 & 3 & 5 \end{bmatrix}$. Write A as CDC^{-1} for a diagonal matrix D.

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answer:

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work:

Continued on back of page _____

[3] Let $A = \begin{bmatrix} 4 & -4 \\ 1 & 0 \end{bmatrix}$. Find the matrix exponential e^{At}.

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answer:

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work:

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[4] Let $A = \begin{bmatrix} -3 & 1 & 2 \\ -5 & 2 & 3 \\ -4 & 1 & 3 \end{bmatrix}$. Find the matrix exponential e^{At}.

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answer:

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work:

Continued on back of page _____