Math 54: Quiz #9

April 27

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Name: _____

Please give neat and organized answers. Whenever applicable (especially for computational questions), make it clear what strategy you are using.

Problem 1

Find the solution of $\mathbf{x}'(t) = A\mathbf{x}(t)$, where

$$A = \begin{pmatrix} 0 & 0 & 1 \\ 0 & 0 & -1 \\ 0 & 1 & 0 \end{pmatrix},$$

that satisfies the inititial condition $\mathbf{x}(0) = \begin{pmatrix} 1 \\ 1 \\ 1 \end{pmatrix}$.

Problem 2

Define ‘math.’ Does your definition differ from what you would have said at the beginning of the semester? Explain.