

UNIVERSITY OF MANITOBA

Quiz 8A

COURSE: MATH 1210

DATE & TIME: Apr 12/13/14, 20 Minutes

DURATION: IN LABS

EXAMINER: Borgersen/Kristel

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1. Let  $t$  be an arbitrary real number, and let  $A$  be the matrix

$$A = \begin{pmatrix} \cos(t) & 0 & \sin(t) \\ 0 & 1210 & 0 \\ -\sin(t) & 0 & \cos(t) \end{pmatrix}.$$

(Read all three parts of this question before you get started.)

- [4] (a) Show that the matrix  $A$  is invertible.
- [3] (b) Find the adjoint of  $A$ . No work needs to be shown for this step.
- [2] (c) Use the adjoint method to find the inverse of  $A$ .