MATH 54 QUIZ2 FEBRUARY 10, 2016

Please show **all** your work! Answers without supporting work will not be given credit. Write answers in spaces provided. You have 15 minus to complete this exam.

Name:_____

1. (8 pts) Find a value h for which the following set of vectors are linearly *dependent*:

$$\begin{bmatrix} 1 \\ 5 \\ -3 \end{bmatrix}, \quad \begin{bmatrix} -2 \\ -9 \\ 6 \end{bmatrix}, \quad \begin{bmatrix} 3 \\ h \\ -9 \end{bmatrix}$$

2. (8 pts) Find the standard matrix for the following transformation T:

   $\mathbb{R}^2 \to \mathbb{R}^2$ first rotates the points through $-3\pi/4$ radians(clockwise) and then reflects points through the horizontal x axis.