

Name \_\_\_\_\_

Student I.D. \_\_\_\_\_

**Math 2250-010**  
**Quiz 8**  
**April 4, 2014**

1) Consider the matrix

$$A := \begin{bmatrix} 2 & 1 \\ 4 & -1 \end{bmatrix}.$$

1a) Find the eigenvalues and eigenvectors (eigenspace bases).

(9 points)

1b) Give a reason to explain why the two vectors you found in part (a) form a basis for  $\mathbb{R}^2$ .

(1 point)