

Name: _____

Section: _____

Quiz 3

15 points

20 Nov 08

INSTRUCTIONS: You will have 15 minutes to complete this quiz. Technology is forbidden on this quiz. Show all work for full credit.

1. Find the **eigenvalues** of

$$\begin{pmatrix} 1 & 3 \\ 4 & 5 \end{pmatrix}.$$

2. The matrix

$$\begin{pmatrix} 7 & 3 \\ 1 & 5 \end{pmatrix}$$

has eigenvalues

$$\lambda_1 = 8 \quad \text{and} \quad \lambda_2 = 4.$$

Find an **eigenvector** associated to the eigenvalue

$$\lambda_2 = 4.$$