MAT 17B, Fall 2020
Homework 8
Due before 4:10 PM on Wednesday, December 9

Please write the homework solutions in connected sentences and explain your work. Mark the answers to each question. Scan or take pictures of your homework and upload it to Gradescope before due time.

1. (10 points) Consider the matrices $A = \begin{pmatrix} 1 & 3 \\ -7 & 2 \end{pmatrix}$ and $B = \begin{pmatrix} 2 & 1 \\ 1 & 0 \end{pmatrix}$. Compute the products AB and BA.

2. (10 points) Solve the linear system of equations
$$\begin{cases} 2x_1 - x_2 = 7 \\ 3x_1 + 2x_2 = 5 \end{cases}$$

3. (10 points) Find the eigenvalues and the eigenvectors of the matrix
$$\begin{pmatrix} 1 & 1 \\ -2 & 4 \end{pmatrix}.$$