

## QUIZ 19

For all questions, assume that  $A = \begin{bmatrix} 2 & 5 \\ 4 & 3 \end{bmatrix}$

1. (2 points) Are  $x = \begin{bmatrix} 5 \\ -4 \end{bmatrix}$  and  $y = \begin{bmatrix} 2 \\ 1 \end{bmatrix}$  eigenvectors of the matrix A?

2. (3 points) Compute the characteristic equation for A.

3. (2 points) What are the eigenvalues of A?

4. (3 points) Find one eigenvector associated to each distinct eigenvalue.