

## Quiz 5

1. If possible, diagonalize  $A = \begin{bmatrix} 0 & -4 & -6 \\ -1 & 0 & -3 \\ 1 & 2 & 5 \end{bmatrix}$  with eigenvalues  $\lambda = 1, 2$ .

2. Let  $\mathbf{y} = \begin{bmatrix} 2 \\ 6 \end{bmatrix}$  and  $\mathbf{u} = \begin{bmatrix} 7 \\ 1 \end{bmatrix}$ . Compute the distance from  $\mathbf{y}$  to a line through  $\mathbf{u}$  and the origin.