

## Complex Eigenvalues

1. **True or False** Real matrices have only real eigenvalues.
  - (a) True, and I am very confident
  - (b) True, but I am not very confident
  - (c) False, but I am not very confident
  - (d) False, and I am very confident
  
2. Which of the following could *not* be the set of distinct eigenvalues for a  $3 \times 3$  real matrix?
  - (a) 2, 5
  - (b) 1, 3, 5
  - (c) 2, 3,  $4 + 7i$
  - (d) 3,  $2 + i$ ,  $2 - i$
  
3. **True or False** Real eigenvalues of a real matrix correspond to real eigenvectors only.
  - (a) True, and I am very confident
  - (b) True, but I am not very confident
  - (c) False, but I am not very confident
  - (d) False, and I am very confident