

Complex Eigenvalues

1. **True or False** Real matrices have only real eigenvalues.
2. Which of the following could *not* be the set of distinct eigenvalues for a 3×3 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.