Introductory Questionnaire Applied Mathematics I - MA 531

Complex Variables

- 1. Have you ever taken a course in complex variables? If so, when and at what level (i.e. high school, undergraduate, or graduate, x number of years ago)?
- 2. Can you graph i on the complex plane?
- 3. Can you state an identity involving e^{ix} ?
- 4. What is the product (1+2i)(3-i)?

Linear Algebra

- 1. Have you ever taken a course in linear algebra? If so, when and at what level (i.e. high school, undergraduate, or graduate, x number of years ago)?
- 2. Can you find the matrix-vector product $\begin{bmatrix} 2 & 1 \\ 1 & 2 \end{bmatrix} \begin{bmatrix} -1 \\ 1 \end{bmatrix}$
- 3. What is the determinant of the matrix above?
- 4. What is an eigenvalue of a matrix? Can you find them for the above matrix?