Consider the following matrix A which defines a transformation from $\mathbb{R}^3$ to $\mathbb{R}^3$:

$$\begin{pmatrix} a & b & c \\ d & e & f \\ g & h & i \end{pmatrix}$$

(a) Use the computer algebra system/programming language of your choice to find a basis for the row and null spaces of the matrix.

(b) Now determine the row and null spaces of the Hermitian transpose of A. Compare them to the subspaces you defined in the prior part. What do you notice?