Let \( A = \begin{bmatrix} 6 & -3 \\ 2 & 1 \end{bmatrix}. \)

(a) Find the eigenvalues of \( A \).

(b) For each of the eigenvalue(s) found in (a), find the corresponding eigenspace.

(c) Is \( A \) diagonalizable? If so, find an invertible matrix \( P \) such that \( P^{-1}AP \) is diagonal.