

NAME: _____
(Last, First)

1. Find the characteristic polynomial and the eigenvalues (only!) of $\begin{pmatrix} 3 & 6 \\ 2 & -1 \end{pmatrix}$.

2. You are GIVEN that the matrix B below has characteristic polynomial $p(\lambda) = (\lambda - 3)^2(\lambda - 1)$. Find the eigenvectors associated with $\lambda_1 = 3$ (only!). $B =$
 $\begin{pmatrix} 6 & 3 & 3 \\ -5 & -2 & -5 \\ 0 & 0 & 3 \end{pmatrix}$