

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [4 points] Use your preferred method to compute by hand A^{-1} if $A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 1 & 3 \\ 2 & 0 & -5 \end{bmatrix}$.

2. [6 points] Find the eigenvalues and the corresponding eigenvectors of the matrix

$$A = \begin{bmatrix} 5 & 2 \\ 8 & -1 \end{bmatrix}.$$