1) [3.1/3.2] Compute the determinant of the matrix A via cofactor expansion, then using properties of the determinant.

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$$

2) [3.1] For $n \geq 2$, show that an $n \times n$ matrix with two identical rows has determinant 0.

3) [5.1 Q33]Let λ be an eigenvalue of an invertible matrix A. Show that λ^{-1} is an eigenvalue of A^{-1}.

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4) [5.2 Q11] Find the eigenvalues/vectors of the following matrix:

$$A = \begin{bmatrix} 4 & 0 & 0 \\ 5 & 3 & 2 \\ -2 & 0 & 2 \end{bmatrix}$$