

Math 272: Linear Algebra with Applications
HW for Section 3.3

1. For each of the following matrices, find $\text{rank}(A)$, and find a basis for $\text{col}(A)$, $\text{row}(A)$, $\text{null}(A)$.

a) $A = \begin{bmatrix} 1 & 0 & 1 & 0 \\ -2 & -1 & 3 & 2 \\ 3 & 1 & -2 & -1 \end{bmatrix}$

b) $A = \begin{bmatrix} 3 & -3 & 3 & 9 \\ 2 & -1 & 4 & 7 \\ 3 & -5 & -1 & 7 \end{bmatrix}$