1. **[4 points]** Let $A = \begin{bmatrix} 1 & -2 & 3 & 1 \\ 4 & -8 & 5 & -3 \\ -2 & 4 & 2 & 6 \end{bmatrix}$. Find a basis for col(A).

2. [3 points] Let A be the matrix from part (a). What is the dimension of row(A)? Explain.

3. [3 points] Give me an example of a matrix with rank 4 and nullity 5.