MATH 335 Quiz 2 Name
Student number

Show all work. 5 points each.

1. Let $A = \begin{bmatrix} 2 & -1 \\ -6 & 3 \end{bmatrix}$ and $\mathbf{b} = \begin{bmatrix} b_1 \\ b_2 \end{bmatrix}$. Show that $A\mathbf{x} = \mathbf{b}$ does not have a solution for all $\mathbf{b}$ and describe the set of all $\mathbf{b}$ for which the matrix equation does have a solution.

2. Given $A = \begin{bmatrix} 3 & -9 & 6 \\ -1 & 3 & -2 \end{bmatrix}$ describe all solutions of $A\mathbf{x} = \mathbf{0}$ in parametric form.